## TWENTIETH CATALOGUE

OF THE

# ARKANSAS INDUSTRIAL UNIVERSITY,

FAYETTEVILLE, WASHINGTON COUNTY, ARK.,

FOR THE

YEAR ENDING DECEMBER 1, 1892,

AND

ANNOUNCEMENT FOR 1893.

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UNIVERSITY BUILDINGS.

## ANNOUNCEMENTS FOR 1892-3

## 1892

September 5 —Session begins at the Branch Normal College at Pine Bluff.

November 2.-Session of the Medical College at Little Rock begins.

November 27. - Baccalaureate sermon at Fayetteville.

December 1 .- Commencement in all departments at Fayetteville.

### 1893.

March 2.-First term begins in all departments at Fayetteville.

March 1-3.-Examinations for admission in all departments at Fayetteville.

April 19.-Session of the Medical College at Little Rock ends.

May 26 .- First term ends in all departments at Fayetteville.

May 29.—Second term begins in all departments at Fayetteville.

June 6 .- Session ends at the Branch Normal College at Pine Bluff.

August 25.-Second term ends in all departments at Fayetteville,

August 28 .- Third term begins in all departments at Fayetteville.

November 26 .- Baccalaureate sermon.

November 30.-Commencement in all departments at Fayetteville.

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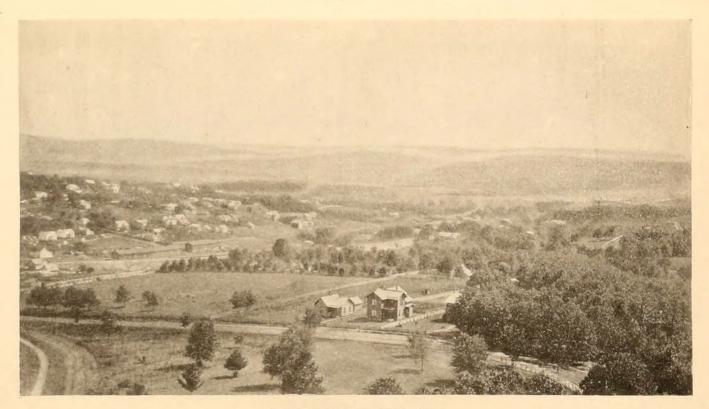
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FAYETTEVILLE AND VICINITY.

## THE UNIVERSITY AND THE STATE.

The University is at the head of the public educational system of the State of Arkansas. It seeks to foster the higher educational interests of the State, broadly and generously interpreted, and to make provision for the demands of advanced scholarship in as many lines as its means will permit. It is the effort of its Faculty and Board of Trustees, from year to year, to bring it into still closer connection with the public schools of the State, and in connection with them to afford to all the youth of either sex ample facilities for liberal education in literature, science and the industrial arts, and for the professional studies.

Through the aid received from the United States and from the State of Arkansas, the University is enabled to offer free tuition, except in the study of medicine, and thus to open wide her doors to all seekers of learning.

The Institution was established in accordance with an act of Congress, making a grant of land for its benefit, and in accordance with an act of the General Assembly of this State, carrying out the object of said grant.

#### LOCATION.

The University, except its Medical College, and Branch Normal College, is located at Fayetteville, Washington County, in Northwest Arkansas, among the Ozark Mountains, and is more than sixteen hundred feet above the sea level. The location is thought to be unsurpassed by any other locality in the State in salubrity of climate, beauty of surrounding scenery, fertility of soil, variety and perfection of agricultural and horticultural productions, and in the morality and intelligence of its people.

Students may reach Fayetteville from both the north and the south by double daily trains on the Texas branch of the St. Louis and San Francisco Railroad, which now connects on the south with the Little Rock and Fort Smith Railroad at Van Buren.

#### AGRICULTURAL EXPERIMENT STATION.

The Agricultural Experiment Station was established as a Department of the University in 1887 by the National Government, and is maintained by it. The object of the Station is to investigate problems relating to agriculture, to ascertain accurate and reliable information by experiments in the field and laboratory, on soils, fertilizers, the diseases of domestic animals, feeds, dairying, etc. The work of the Station is directed to questions that are of the most immediate practical importance to farmers, stock raisers and others. Two branch Stations are established at Newport and Pine Bluff to duplicate and make experiments applicable to the diversity of soil and climate of the State.

The Station undertakes to furnish, as far as possible, information to farmers and others on questions of importance relating to agriculture. Results of experiments are published in bulletins and mailed free to citizens of Arkansas who desire them and make application to the Director.

#### BUILDINGS.

The main University Building (see frontispiece) is a magnificent structure of brick, four stories in height, with a stone basement and Mansard roof. It occupies three sides of a quadrangle, and has a frontage of 214 feet.

In the north wing are situated the Chapel on the first floor, the Library and the Reading Room on the second, and the Engineering Drawing Room on the third; in the south wing, first floor, the hall for boys, and second floor, the hall for girls, of the Preparatory Department.

The main front of the building is divided into offices, recitation rooms and laboratories. The offices of the President and the Commandant, and the room: of the Preparatory and the Musical Department are on the first floor, the Departments of Mathematics, Ancient and Modern Languages, History and Pedagogics, and Elocution, have convenient rooms on the



EXPERIMENT STATION AT NEWPORT.

second floor, while the Departments of Agriculture, Chemistry and Physics, Biology and Geology, and Engineering, are accommodated on the third floor. Above, on the fourth floor, are the commodious and well-furnished halls of the literary societies and the Museums.

This building covers an area of 26,108 square feet, and contains seventy rooms, together with broad corridors and ample stairways. As a safeguard against fire, and to insure uniform temperature, the entire building is heated throughout by steam.

The new Dormitory, in accordance with legislative enactment, was crected by the Board of Trustees in 1887, and opened to the use of students in the spring of 1888. It is a substantial brick building, three stories high, containing over forty rooms. In finish and appearance, both externally and internally, it is a model structure. The rooms are large, airy, well ventilated and lighted, and open into broad corridors extending lengthwise through the building. The entrances are five in number, three in front, which open upon a broad veranda, and two in the rear. As to location, every precaution has been taken to insure good health to its occupants.

The building of the Agricultural Experiment Station is of brick, one story in height. It contains the office of the Director, the apartments of the Chemist, Horticulturist, Veterinarian and Entomologist, together with a commodious Chemical Laboratory, Weighing Room, Microscope Room and Store-rooms.

The new Shop Building was erected in the spring of 1889. It is of corrugated iron, 170 feet long, 40 feet wide, and one-story high, with ample light and ventilation. The Wood Room is 40x60 feet in size, the Metal Room 40x40, the Forge Room 40x25, and the Foundry 40x45 feet.

Connected with the Department of Agriculture are a large barn, stock shed, dairy house, fruit house and other necessary outbuildings.

#### THE LIBRARY.

The book-room of the Library (newly refitted last year), has shelf space for 14,000 volumes, with room for expansion. It now contains about 6000 bound volumes and 5000 unbound volumes and pamphlets. The increase during the year has been about 1000 bound volumes and 2000 pamphlets. The Dewey decimal system of classification and the Cutter booknumbers have been in successful use for the last year and a half, and author and subject-card catalogues are being rapidly prepared.



LIBRARY.

The Reading Room is furnished with the principal magazines and reviews, general and scientific; the St. Louis and Little Rock daily papers and nearly all the county papers of Arkansas.

#### MUSEUMS.

The University has two Museums, which are of great value in furnishing materials for the illustration of scientific studies and the industrial arts.

#### MUSEUM OF NATURAL HISTORY.

The Museum occupies the fourth floor of the south wing of the main building. Adjoining it are two rooms, one being used for the storage of alcoholic specimens, the other for taxidermy. The collections in the Museum at present comprise the following:

150 birds and maminals, 60 species.

130 reptiles and amphibians, 40 species.

300 fishes, 50 species.

1000 insects and other invertebrates, 200 species.

II skeletons.

3000 plants, 1500 species.

1000 fossils, 200 species.

300 minerals, 150 species.

A few archæological specimens, also a few anatomical and physiological preparations.

Except in the case of minerals and fossils, the most of our collections are from Arkansas.

Prof. Meek has deposited in the Museum his private collection of about 250 species, consisting mostly of the lower vertebrates.

Our aim is to make the Museum of more practical and educational value, and to this end we would invite the co-operation of all the people of the State in completing our collections in one or more of the directions indicated below:

- 1. An exhibition of valuable rock materials used in construction, architecture and the arts.
- 2. An exhibition of native ores, with specimens illustrating the metallurgy of useful metals.
- 3. Collections of plants and animals of the country, including fossil species.
  - 4. Historical and archæological collections.

The Museum will gratefully acknowledge donations of various objects, and the donors may be sure that anything of value sent to it will be carefully preserved and duly credited to the donor. Collections in the hands of private parties are likely to be soon scattered or spoiled through improper care and handling. The Museum is now prepared to receive collections on deposit, and to preserve and display them under the owner's name until called for. In this way owners of interesting collections are usually much more certain of having their collections permanently preserved, and the collections will be seen by more people and become more useful.

#### INDUSTRIAL MUSEUM.

Among the facilities for instruction contained in the equipment of the University, may be mentioned:

A Dean steam pump with air chamber, water and steam cylinders and valve chambers sectioned, so that a student may see the working parts.

A Cameron steam pump with the steam cylinder sectioned.

A Blake steam pump in full working order.

Two small horizontal and one vertical steam engine made by the students in the shop.

A fire hydrant in working order.

Samples of articles of manufacture form a large part of the collection and are found to be of great service in acquainting students with the construction. Among these may be mentioned link belting, steam-pipe covering, grease cups, injectors in sections, water meters, insulated wire, lead cables and lubricating oils. Models of a large number of machines of various kinds are also in the collection.



CHEMICAL LABORATORY.



MINERALOGICAL LABORATORY.

#### LABORATORIES.

In the Laboratories of the University opportunities are afforded for practical instruction in chemistry, mineralogy, physics, botany, zoology, entomology, horticulture and civil, mechanical and electrical engineering.

#### CHEMICAL LABORATORY.

The Chemical Laboratory is well supplied with a paratus and has accommodations for twenty students in qualitative and quantitative analysis, and twenty-two students in general chemistry. The appliances are of the latest design, with gas and water at every desk, and all requisites for chemical work.

#### MINERALOGICAL LABORATORY.

This Laboratory has work benches for eight students, and is supplied with all requisites for blow-pipe work and the general examination and assaying of minerals.

#### PHYSICAL LABORATORY.

The new Physical Laboratory will accommodate twenty-eight



PHYSICAL LABORATORY.

students. It is fitted with a small dynamo and a supply of general apparatus for work in practical physics.

#### BIOLOGICAL LABORATORY.

The Biological Laboratory will accommodate twenty-six students. It is well equipped with microscopes, microtomes, micro-chemical reagents, and the special apparatus for bacteriological work. A large aquarium furnish means for the preservation of living animals for classes in zoology. All the apparatus necessary for the collection, mounting and preservation of plants and insects is supplied in abundance. Each table is fitted with gas and distilled water, and each student is supplied with all the chemicals and tools needed in botanical and zoological dissections, and in the hardening, sectioning, staining and mounting of material for histological work. A micro-photographic outfit, and an incubator for embryological work complete its equipment.

#### GEOLOGICAL LABORATORY.

This Laboratory is provided with aneroid barometers, compasses, levels, pedometers, etc., for field work, and the necessary drawing apparatus for the construction of geological sections and for making geological maps. It also contains apparatus for grinding sections of rock for microscopic examination. The paleontological collections contain fossils characterizing the different geological ages, being especially rich in coal plants.

#### ELECTRICAL LABORATORY.

During the past year the Electrical Laboratory has been furnished with the following equipments:

Galvanometers of various types, tangent, sine, Desprez d'Arsonval, ballistic, astatic and reflecting; ammeters and voltmeters of different makes, magnetometers, a wheatstone bridge, wattmeter, a bank of incandescent lamps, a large set of German silver resistances for dynamo work, and a sixty-cell storage battery arranged especially for experimental work.

In addition to this the Laboratory has available for the sup-



BIOLOGICAL LABORATORY.



GEOLOGICAL LABORATORY.

ply of current, tests, etc., the electric lighting and power transmission plant, which is conveniently connected with the instrumental room.

#### ENGINEERING LABORATORIES.

Shops.—The shop building, erected in the spring of 1889, is of corrugated iron, 170 feet long, 40 feet wide, one-story in height, well lighted and ventilated. The wood shop is 40x60 feet in size, the machine shop 40x40 feet, the forge shop 40x25 feet, and the foundry 40x45 feet.

During the fall of 1892 an addition to the shops, 20x40 feet, was put up almost entirely by the students.

The Wood-working Shop is equipped with eighteen well appointed work benches with tools, seven turning lathes, one pattern maker's lathe, one double circular saw, one scroll saw, one band saw, one reversible shaping machine, one planing machine, one steam glue heater and one trimmer.

The Equipment of the Forging Shop at present consists of nine forges of the most improved design, nine anvils and nine sets of tools, consisting of hand-hammer, tongs, calipers, steel rule, steel square, hot and cold cutters, file, flatter, fullers, swedges, punches, heading tools, etc. The forges are supplied with power blast, a No. 6 Buffalo blower serving for this purpose. This shop has also a double emery grinder and a black-smith's post drill.

The Moulding Room and Foundry are equipped with a Colliau cupola which will melt from 200 pounds to one ton of iron at once, one brass furnace, one core oven, nine sand troughs and moulders' benches combined, nine sets of moulder's tools, consisting of heart and square trowel, slickers, rammers, riddle, flask, swab, water pot, shovel, lifters, drawer, spikes, etc., six ladles from 100 to 5 pounds capacity, and an assortment of flasks, and other necessaries for a complete foundry.

The Equipment of the Machine Shop consists of thirteen work benches with vises, sets of tools and closets, one 12-inch engine lathe, three 14-inch engine lathes, one 19-inch engine lathe, one speed lathe, one planer 24x24x72 inches, one planer

10x10x24 inches, one Universal milling machine, one double-wheel emery grinding machine, one Universal cutter grinder, one drill press, one grinding stone, and chucks and other appliances for use on the lathes, planers, etc. Each machine has its distinct set of tools. This shop is well equipped with hammers, steel rules, steel squares, spring dividers, chisels, twist drills, taps, dies, tap wrenches, die stocks, reamers, pipe dies, files of all sizes and shapes, wrenches, arbors, lathe-dogs, squares, scales, calipers (inside and outside), machine and hand-cutting tools, a surface gauge, a surface plate, a Victor micrometer caliper, a set of caliper gaugers, a protractor and many other tools. The machinery is driven by a 25-horse-power Westinghouse engine.

Capacity of Shops.—Seventy-five sudents can be accommodated in the shops at one time, divided among the rooms as follows:

Wood-working	Room			 				 		٠.						٠			 2	24
Metal-working																				
Forging Room																				
Foundry																			- 2	U.
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Engine and Bo	iler Ro	om	S	 		,					e					0	 ۰			3
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BOILER ROOM AND FOUNDRY.

The Boiler Room contains two horizontal flue tubular boilers set in brick work, aggregating 60-horse power. These are used for heating the main building and running the shops. A 60-horse power return tubular boiler set in a three-travel furnace and having a new design of iron stack has been recently added for power purposes and experimental work. This room also contains a pressure-reducing valve, an automatic heater trap and governor, Blake pump, feed water heater, Hancock inspirator, gauges and other necessary appliances.

Drawing.—The equipment includes the usual tables and stools, and among the special apparatus and instruments may be nentioned the planimeter, pantograph, blue-print frame, traverse table, odontograph, slide rule, sets of railroad and machine curves, roof pitches, etc. Materials are kept on hand and supplied to students at catalogue rates. Drawing instruments are purchased for students at a discount.

Surveying.—For the work in railroad, land and city surveying, the equipment furnishes chains, tapes, plumb bobs, a



ENGINEERING LABORATORY.

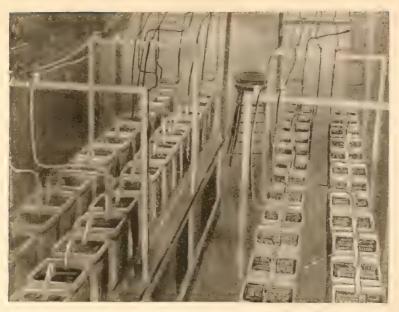
Locke level, aneroid barometer, sextant, Y level, transits with solar attachment, plane table, etc. Not the least valuable part of the equipment is a surrounding country which offers problems in most of the varieties of work which meet the practical surveyor. Each year, during the summer, a party of engineers goes into camp one week for practice in survey and location of railway lines.

Experimental Engineering.—The boilers generating steam for heating and power, also furnish practice in determining the amount of steam made for each pound of coal burned. The amount of moisture in the steam is also tested by a calorimeter constructed in the shops. A feed pump and an injector are so arranged that comparative trials may be made for efficiency as boilers feeders. The engine used to run the shops and electric light plant is used to furnish practice in measurement of power from indicator cards and the pony brake. During the session of 1892 a series of tests were made to determine the water consumption of the engine per horse power per hour, in which the weight of steam used was determined by condensing the exhaust in a feed water heater at atmospheric pressure, and weighing the amount delivered.

A Riehle testing machine, run by a 10-horse power motor and capable of exerting a pull or pressure of 60,000 pounds, has been installed and used in experimental work upon the materials used in buildings, bridges and machinery. A practical application has been made in determining the tensile strength of the steel plates used in the two 30-horse power boilers for the Branch Normal shops, and the 60-horse power boiler for the Arkansas Industrial University shops.

A 2000-pound cement testing machine is used to determine the tensile strength of various cements, and their resistance to crushing. A saw for stone cutting has been designed and constructed for the purpose of cutting out specimens for tensile and crushing tests.

A complete incandescent electric light plant has been installed, and is used for lighting the main building, and for experimental work. A 180-light dynamo and a 10-horse power



STORAGE BATTERY.

motor supply power to run the machinery of the Laboratories and current for lighting the buildings and for laboratory work. A storage battery capable of supplying a current at 110 volts for thirty or forty incandescent lamps of 16-candle power, is used for lighting and laboratory work.

## GENERAL INFORMATION.

#### REQUIRED, ELECTIVE AND OPTIONAL STUDIES.

Each student must have not less than fifteen hours per week of lectures, recitations and practical work; two hours of practical work being considered equivalent to one hour of recitation. When less than fifteen hours is mentioned for any class, the student must elect studies to supply the deficiency. Electives taken from the studies of a class one year below have full value, but if more than one year below, their value will be fixed by the Faculty. Students are not allowed to take additional studies to exceed twenty hours in all, except by permission of the Faculty.

#### SPECIAL STUDENTS.

Persons of mature years and judgment, who have passed the examinations for admission, are allowed to pursue irregular courses of study; but they must, in all cases, satisfy their professors that they are prepared for the work of the class they seek to enter.

#### TERM EXAMINATIONS.

At the close of each term examinations are held. In order to "pass" a student must obtain 75 per cent in each subject.

Students who are unsuccessful in any subject of a term are reported by the professor as being "incomplete" or as "conditioned." "Incomplete" work may be made up at the convenience of the professor concerned; "conditions" may be made up within two terms. Conditions of any term that are not made up by the beginning of that term must be taken over in class.

#### LITERARY SOCIETIES.

The students' literary societies, three in number, meet weekly in their respective halls, and their members enjoy the advantages of debate and other literary exercises, thus acquiring general culture and becoming familiar with the popular modes of conducting business in deliberative assemblies. These so-

cieties occasionally give public entertainments, and much interest is manifested.

#### AIDS TO MORAL AND RELIGIOUS INSTRUCTION.

Religious exercises are held regularly in the University Chapel at the beginning of each daily session. Students are required to attend.

The literary societies, which have a large membership, have held regular meetings, and have maintained a reading room in the University dormitory.

The churches of Fayetteville cordially welcome the students to their Sunday-schools and various meetings for prayer and religious instruction. The denominations represented in the city are Baptist, Presbyterian, Cumberland Presbyterian, Methodist, Protestant Episcopal, Christian and Roman Catholic. Many of the students are actively engaged in the work of the different church societies and guilds.

#### SALE OF ARDENT SPIRITS NEAR THE UNIVERSITY.

By an act of the General Assembly of the State of Arkansas, approved March 6, 1875, it is unlawful for any person to sell or give any vinous or ardent spirits within three miles of the Arkansas Industrial University, unless it be prescribed by a regular practicing physician for medicinal purposes.

#### EXPENSES.

Matriculation, charged all new students 5 00	)
Tuition per session charged all except beneficiary stu-	
dents 10 oc	)
Music fees (see music, page 76).	
Furniture for dormitory students, at cost, usually about 15 oc	)
Board in dormitory at cost, per month, from \$ 7 00 to 8 00	)
Board in private families, per month, from 12 00 to 15 00	)
Uniform suit, purchased by student, from 13 00 to 17 50	)
Washing, per month, about I oc	)
Students leaving the University frequently sell their furni-	
ture at a small reduction.	

Rooms in the University dormitories are free, but occupants

provide their furniture, fuel and lights. If there are not rooms enough for all, preference is given to Arkansas students. An officer of the University lives in the building and superintends it, and the rooms are regularly inspected by the Faculty.

Students boarding elsewhere are under the supervision of the President of the University and are allowed to board only at places approved by him.

#### BOARDING FOR YOUNG LADIES.

There is at present no special residence for girls. They are assisted in finding board in respectable families; but the Faculty is not so situated as to exercise constant supervision over them out of college hours. Parents at a distance who send a daughter to the University, should therefore be well satisfied as to her discretion, or else should place her under control of the family with whom she boards. The following ministers, pastors of the local churches named, kindly offer their services in assisting the President to secure suitable boarding places for young ladies: Rev. S. W. Davies, Presbyterian; Rev. S. Anderson, Methodist; Rev. J. T. Malloy, Cumberland Presbyterian; Rev. N. M. Ragland, Christian, and Rev. J. W. Lipsey, Baptist.

#### STUDENT LABOR.

Able-bodied male students of the Freshman Class are required by law to perform ten hours' manual labor per week, either on the experimental farm or in the shops or laboratories. For farm or shop work they are paid from 3 to 10 cents per hour, according to their diligence. Some students meet their expenses by this and other labor.

#### ARRIVAL OF STUDENTS.

Students, on arriving at Fayetteville, must report at once to the President of the University. No student will be allowed to recite in any class until properly enrolled, but will be held responsible for his conduct from the time of his arrival in Fayetteville.

#### CONDITIONS OF ADMISSION INTO THE UNIVERSITY.

After the close of the session of 1892 no new student will be admitted who is less than 14 years of age.

All applicants for admission into the University must, if required, furnish evidence of good moral character.

Dismissed, or expelled students, from other institutions of recognized standing, may be refused admission to this University.

#### PREPARATION FOR THE FRESHMAN CLASS.

- 1. English. Meiklejohn's English Grammar with analysis, or a full equivalent; a composition of 200 to 300 words, correct in spelling, punctuation, paragraphing and grammar, upon a subject announced at the time of the examination. In 1893 the subject will be taken from Irving's Sketch Book or from Shakespeare's Julius Cæsar; in 1894, from Irving's Alhambra, or Shakespeare's Julius Cæsar, or Henry VIII.
- 2. Arithmetic. The examination will be taken from Wentworth's Grammar School Arithmetic, the whole of which is required. Teachers preparing candidates for entrance should, in teaching arithmetic, require them to analyze every example capable of analysis, or give a thorough course in mental arithmetic. Students who are not quick at analysis in arithmetic usually make poor progress in higher mathematics.
- 3. Algebra to Quadratic Equations, involving two unknown quantities, with special attention to factoring, the theory of exponents and radicals. The examination will be taken from Robinson's University Algebra.
- 4. Plane Geometry. In 1893 candidates will be examined in first three books of Wentworth's Geometry.
- 5. History. The examination will be taken from Eggleston's History of the United States, and from Hempstead's History of Arkansas.
- 6. Geography. Any complete manual, such as Harper's or Maury's, will give the preparation, if thoroughly mastered. Special attention is given to the geography of the United States and of Arkansas.

- 7. Physiology. In 1893 and thereafter, candidates will be examined in Martin's Human Body, briefer course.
- 8. Latin. Jones' First Lessons in Latin complete, with all its references to Gildersleeve's Latin Grammar; Cæsar's Gallic War, three books, with questions on the implied grammar and on the subject matter, military equipment, etc. Kelsey's or Greenough's Cæsar is recommended. In 1893 three books will be required, and in 1894 four books. Latin is not required for admission except to the College of Liberal Arts or to the Normal School.

Candidates for the higher classes, or for the Freshman Class, after beginning of session, will be examined also in subjects passed over by the class.

Each student should come prepared for all the studies in some one class. If he is behind in one or more studies, he becomes irregular, and is necessarily subject to many inconveniences, though he may be admitted and classified according to his attainments.

#### SPECIMEN EXAMINATIONS FOR FRESHMAN CLASS

Examinations will be of the same general character as the following:

#### I. MEIKLFJOHN'S ENGLISH GRAMMAR. 2 hours.

- 1. Tell all the different ways of distinguishing gender; illustrate each by example.
  - 2. Name and define all the different kinds of pronouns.
- 3. Give distinction between strong (or irregular) and weak (or regular) verbs, and principal parts of one strong verb and of one weak verb. Give a complete synopsis of the verb know in the passive voice, using the third person singular.
- 4. Analyze carefully the following sentence, giving special attention to the relation of the subordinate clause to the principal clause: "The love of reading, which Gibbon declared he would not exchange for all the treasures of India, was, with Macaulay, a main element of happiness in one of the happiest lives that it has ever fallen to the lot of the biographer to record."
- 5. Parse the words italicized in the above sentence. Construe the words italicized in the following sentence: (1) They offered Casar the crown three times.
- 6. Name the prefixes and suffixes in the following words and tell what force they have. (1) Steward. (2) gainsay, (3) golden, (4) weakness ) forbid, (6) stagger, (7) misdeed, (8) trickster, (9) sparkle, (10) withstand.

#### II. ENGLISH COMPOSITION. I hour.

Write a composition of 200 to 300 words upon "The Quarrel Between Brutus and Cassius."

#### III. ARITHMETIC. 2 hours.

First, second, third, fourth and fifth questions same as in examination for admission to High School, page —.

- 6. See Wentworth's Arithmetic, page 236, example 9.
- 7. See Wentworth's Arithmetic, page 261, example 5.

#### IV. ALGEBRA. 11/2 hours.

1. Simplify the following expressions by removing the parentheses and collecting like terms:

(a) 
$$a-[b+\{a-(d+a)\}]$$
  
(b)  $-[5x-(11y-3x)]-[5y-(3x-6y)]$ 

2. Resolve the following into factors:

$$x^3+y^3$$
,  $x^4-y^4$ ,  $x^2-19x+90$ , 240+x-x<sup>2</sup>, and  $x^3-8$ .

3. Find the greatest common divisor of-

$$8x^3-2x^2-53x-39$$
 and  $4x^3-3x^2-24x-9$ .

4. Given: 2x+3y+4z=20. 3x+4y+5z=26. 3x+5y+6z=31.

To find the values of x, y, z.

5. Find the cube root of-

$$1-9x+39x^2-99x^3+156x^4-144x^5+64x^6$$
.

6. Find the value of-

$$(\sqrt{7+5}\sqrt{3})$$
  $(2\sqrt{7-5}\sqrt{3})$ ;

and the value of x in

$$14-\sqrt{x-3}a=6$$
, and  $x^2+6x=27$ .

### V. PLANE GEOMETRY. 13/2 hours.

## Demonstrate the following propositions:

- 1. The three perpendiculars from the middle points of the sides of a triangle meet in the same point.
  - 2. An inscribed angle is measured by one-half of its intercepted arc.
- 3. Upon a given straight line, describe a segment of a circle which shall contain a given angle.
- 4. If two triangles have their sides respectively parallel, or respectively perpendicular, they are similar.
- 5. If from a point without a circle a secant and a tangent are drawn, the tangent is a mean proportional between the whole secant and the extreme segment.

### Tell all about the following:

1. De Soto. 2. The Battle of Guilford Court House. 3. The Missouri Compromise. 4. The Doctrine of State's Rights.

#### VII. GEOGRAPHY. 11/2 hours.

- 1. Name in their order twenty river flowing into the Atlantic Ocean or its arms between the Bay of Fundy and the Florida Keys.
- 2. Name the principal cities of Louisiana, Texas, Ohio, Illinois, Michigan and Minnesota (one city each), and describe their situation.
  - 3. Describe the climate and productions of Mexico.
- 4 and 5. What and where are the following? Give exact location: Aconcagua, Aral, Baikal, Bothnia, Ceylon, Delhi, Farewell, Formosa, Hecla, Munich, Ponchartrain, Sunda, Verde, Volga, Yukon.

#### VIII. PHYSIOLOGY, 1 hour.

- 1. Describe the structure of the femur.
- 2. How does the blood-plasma differ from blood serum?
- 3. Describe the formation of a blood clot.
- 4. Define the terms "afferent," "efferent," "voluntary," "involuntary," "reflex."
- 5. Name and give the most important characteristics of eight of the principal tissues of the body.

#### IX. LATIN, 2 hours.

Translate Casar's Gallic War, Book I, chapter 22, from Prima luce to abstinebat.

- 1. Give principal parts of abesset, accurrit, teneri, cognovisse, instruit.
- 2. Explain cases of luce, equo, quem, ei, tempore.
- 3. Explain uses of modes in teneretur, teneri, fieret.
- 4. Compare prima, summus, proximum, longius.
- 5. Give the whole indicative mode of *voluerit*, and the whole subjunctive of abesset, and translate the first person of each tense.
  - 6. Decline passibus, eum, quem, insignibus, uno.
  - 7. Parse hostium, occupari.

Translate Book II, chapter 32, from ad hac to dixerunt.

#### Translate into Latin:

The will order the lieutenant to send soldiers as a relief to our men. 2. We are so many in number that we can easily keep their army from the march. 3. If they make peace with us, we shall go into that part where they wish us to be. 4. We cannot see the mountain, although it is of great height. 5. We shall march through Geneva at sunset, because we are not more than twenty miles distant.

Besides this, an oral examination is required.

ORDER OF EXAMINATIONS FOR ADMISSION, MARCH 1-3, 1893.

Wednesday, 1. 9 a. m. Registration of all students who are required to matriculate.

1-3 p. m. Arithmetic.

Thursday, 2. 9-11 a.m. English Grammar and Analysis. 11-12 a.m. English Composition, Reading.

1-4 p. m. Geography and History, Reading.

Friday, 3, 9-12 a.m. Algebra and Geometry, Reading.

1-4 p. m. Latin and Physiology, Reading.

#### LOCAL EXAMINATIONS.

Students living more than a hundred miles from the University may, by making satisfactory arrangments, obtain special local examinations two weeks before the beginning of each session. The questions will be sent to any principal of a school or County Superintendent who will supervise the examination for the candidate, provided such officer makes his application in time. Such application must reach the University as early as February 1st for admission for first term. The questions must be submitted by the superintendent or principal to the candidate under the usual restrictions of a written examination, and the questions and answers must be returned by the same officer to the University with his indorsement that the examination has been properly made. Candidates should in all cases return only fair and honest answers; otherwise they will be seriously embarrassed in their future courses. The candidate must secure the consent of the principal or superintendent who is to hold the examination.

#### ADMISSIONS UPON ACCREDITED CERTIFICATES.

Accredited Schools.—Any high school or academy whose course of instruction covers all the branches requisite for admission to the University, may be placed upon the accredited list of preparatory schools. Upon application from the principal of any high school or academy, an officer of the University will be sent as soon as possible to examine the course of study and methods of teaching. If his report is favorable, the school will be placed upon the accredited list and its graduates will be admitted to the Freshman Class without examination. Students of accredited schools who may not be graduates, will be excused from examination on subjects required for admission into the University, upon certificates of proficiency in such studies from the principal. A school once placed upon the

accredited list will remain there until its administration is changed or until a notification that the work is unsatisfactory is received from the University. Upon a change of administration, an application to be continued upon the list of accredited schools should be forwarded to the University. Such request may be granted without a new examination if the authorities can assure themselves that no prejudicial changes in the courses of study or in the thoroughness of instruction will be made.

The University will do all in its power to bring about that close and cordial relation which should bind together the various branches of the common school system.

#### LIST OF ACCREDITED SCHOOLS.

Fort Smith Public High School, Fort Smith, Ark.

#### APPOINTMENT OF BENEFICIARIES.

All appointments shall be completed, if possible, before the opening of the Spring term. The County Judges make the appointments and send them according to the directions below. If the appointee fails to appear at the University within twenty days after an appointment (except in case of sickness), he or she will be regarded as having declined the appointment, in which case it will be the duty of the President of the Faculty to notify the person making the appointment of such failure, and he, in turn, should make another appointment as soon thereafter as possible. The President of the Faculty shall continue to notify appointing officers until their respective number of appointees make their appearance at the University.

All the beneficiary students should be present at the opening of the Spring term, and unnecessary delay will lead to the forfeiture of their appointments.

#### QUALIFICATIONS.

The attention of County Judges is called to the fact that no beneficiary students will be admitted unless they have the following qualifications:

Students are not admitted until they have become familiar

with the fundamental principles of arithmetic as far as percentage. In reading, they must be able to understand and intelligently render specimens of the grade of the Fifth Reader, must have a good knowledge of elementary English grammar, geography, and the spelling of all words of the grade of the Fifth Reader. These qualifications are the test of admission at the beginning of the session; those applying later will be admitted only on the grade of the class. (See admission to Preparatory Department, p. 95.)

#### FORMS OF APPOINTMENT.

Students who have been appointed beneficiaries must bring evidence of appointment in the following forms of notice, to be sent by the Judge of the County Court, in accordance with the sixth section of an act approved March 6, 1875:

	[Form 1—Appointment.]	
No	[To be given to the Student.]	
To whom it may con	cern:	
I hereby appoint	of	County.
State of Arkansas, a	s a beneficiary to the Arkansas Industrial University.	
Given under my	hand this day of	

Send a notice like the following to the President of the University, and one to the Secretary of the Board of Trustees, at Fayetteville:

	[Form 2-Notice	e to Preside	nt of Univers	ity.]		
					🐧	
To the	Un	iversity:				
I hereby notify you	that I have this d	ay appointe	d			of
	County, State	of Arkansa	s, a beneficia	ry to the Arkan	sas Industria	ai
University.						
Given under my han	d this	day of		189		

#### NUMBER OF BENEFICIARIES.

The number of beneficiaries is limited to one thousand, distributed to the counties of the State in proportion to the population of 1880, and in every case in which a county fails to supply its quota of beneficiaries, the Governor is authorized to appoint such beneficiaries to the full number authorized by law; Provided, That such appointment may be vacated on applica-

cation from a county so failing to fill its quota, but may be resupplied from some other county whose quota has not been filled:

COUNTIES.	Beneficiaries.	COUNTIES.
rkansas	10 1	Lee
shley	13	Lincoln
axter	7	Little River
enton	24	Logan
oone	15	Lonoke
radley	8	Madison
alhoun	7	Marion
arroll	16	Miller.
hicot	12	Mississippi
lay	13	Monroe
lark	15	Montgomery
leburne	8	Nevada
leveland	16	Newton
olumbia	19	Ouachita
onway	16	Perry
raighead	- 8	Phillips
rawford	111	Pike
rittenden	11	Poinsett
ross	6	Polk
allas	1 9	Pope
esha	11	Prairie
rew	15	Pulaski
au kner	17	Ra dolph
ranklin	18	Saline
ulton	8	Scott
arland	11	Searcy
rant	8	Sebastian
reene	9	Sevier
empstead	24	Sharp
ot Spring	10	Stone
oward	12	St. Francis
dependence	21	Union
zard	14	Van Buren
ackson	15	Washington
efferson	29	White
ohnson	15	Woodruff
afayette	6	Yell
awrence	10	

There is also one "Honoray Scholarship" to each county, to be elected for superior merit and proficiency, from the public schools of each county, according to section 2, of act of July 23, 1868.

#### ABSENCES.

Absences from the University during the session are not permitted except for reasons of importance. The parent has, at all times, the right to withdraw his son entirely and finally, without reason assigned; but without so withdrawing him he cannot relieve him of the obligation to attend on his duties at the University. The incidental absences of students during the session are exceedingly disadvantageous, both to them-

selves and the University. While, therefore, the Faculty permit them, in cases where propriety or urgent necessity seems to make them unavoidable, they hold it to be a duty to inquire into the reasons for which the permission is solicited.

No absences are permitted during the summer term for reasons that would not be valid at other times.

### WITHDRAWAL OF STUDENTS.

Parents or guardians who wish to withdraw their children or wards from the University should write to the President of the Faculty, stating their wishes. No honorable discharge will be given to a student under age, who is unable to produce the written application of his parent or guardian for his withdrawal, or if his number of demerits shall exceed the proportion of two hundred allowed during the session. Nor will an honorable discharge be given to a student under censure of any kind, whether for neglect of duty or other cause, even though he may have the consent of his parent or guardian for his withdrawal from the University.

# ORGANIZATION OF THE UNIVERSITY.

The following are the colleges, schools and courses:

### I. AT FAYETTEVILLE.

1. The School of Agriculture.

Farmer's Course.

- 2. The College of Mechanic Arts and Engineering.
  - (a.) Course in Mechanical Engineering.
  - (b.) Course in Civil Engineering.
  - (c.) Course in Electrical Engineering.
  - (d.) Manual Training Normal Course.
  - (e.) Stationary Engineer's Course.
  - (f.) Trade's Course.
- 3. The College of Science.
  - (a.) Course in Chemistry.
  - (b.) Courses in Botany and Zoology.
  - (c.) Courses in Horticulture and Entomology.
  - (d.) Course in Geology.
  - (e.) Medical Preparatory Course.
- 4. The College of Liberal Arts.
  - (a.) Course in Arts with Mathematics.
  - (b.) Course in Arts with Modern Languages.
  - (c.) Course in Arts with Ancient Languages.
  - (d.) Course in Arts with History.
  - (c.) Graduate Courses.
- 5. The Normal School.

Normal Course.

- ·6. The Preparatory Department.
  - (a.) Agricultural Course.
  - (b.) Engineering and Manual Training Courses.
  - (c.) Scientific Course.
  - (d.) Classical Course.
- 7. The Agricultural Experiment Station.

#### IL AT LITTLE ROCK.

8. The College of Medicine.

Course in Medicine.

#### III. AT PINE BLUFF.

- -9. Branch Normal College.
  - (a.) Normal Course.
  - (b.) Classical Course.
  - (c.) Mechanical Course.

# DEPARTMENTS OF INSTRUCTION.

The arrangement of elective courses enables students to concentrate their work upon special lines or subjects, and each student is expected to complete the undergraduate studies of at least one language or science. The following rules for elective studies will be observed:

- t. No study can be elected, unless the professor in charge deems the student prepared to pursue it.
- 2. No elective study shall be changed before the end of the term.
- 3. No professor shall be required to teach an elective course, unless three or more students pursue it.

### AGRICULTURAL DEPARTMENT.

A. E. MENKE, Superintendent.

W. B. BENTLEY, Adjunct Professor.

W. F BATES, Assistant Instructor.

J. M. MOORE, Assistant Foreman.

# I. (a.) Elementary Dairy Husbandry.

The primary principles of dairy work are taught by class-room instruction, accompanied with daily practical work in the dairy.

# (b.) Elementary Agriculture.

The reasons for the various farm operations, and the conditions under which they can be most successfully accomplished form the subject matter of the instruction.

# II. (a.) Veterinary Anatomy.

Lectures and laboratory work five times a week in the first term.

# (b.) Veterinary Science.

Lectures and demonstrations, three times a week in the second term; twice a week in the third.

# III. (a.) Horticulture.

Class-room and practical work four times a week the the first term.

### (b.) Advanced Agriculture.

This class can be taken by those students only who have passed the elementary, and have some knowledge of chemistry and botany. First term once, second term twice weekly.

### (c.) Stock Breeding.

Class-room work on the principles of improvement and selection according to Warfield, Sanders and Powell. Three times a week throughout the year.

# (d.) Advanced Dairy Husbandry.

The management of large dairies, the principles of scientific feeding, the economic production of dairy products and other related topics. Four times a week the second and third terms.

### MECHANIC ARTS AND ENGINEERING.

C. V. KERR, Mechanical Engineering, Supt. Mech. Arts.

G. C. Schoff, Civil Engineering.

H. B. SMITH, Electrical Engineering.

S. L. GRINSTEAD, Wood Shop.

WILLIAM M. GILMORE, Forge and Foundry.

MACK MARTIN, Machine Shop.

HENRY CAWOOD, Engineer.

# I. Wood Working ("A" Class.)

Principles of carpentry and joinery; wood turning; pattern making; cabinet work. Eight hours per week.

# II. (a.) Founding (Sub-Freshman).

Moulding; melting and pouring brass and iron; management of cupola. Half year, 8 hours per week.

(b.) Forging: Management of fire; drawing; welding; riveting; tempering. Half year, 8 hours per week.

# III. Machinist Work (Freshman).

Chipping and filing; turning; planing; milling; drilling; grinding; metal fitting and erection of machinery; millwrighting; care of engines and boilers. Eight hours per week.

IV.

As a one year's course during the fourth year of the manual training course, the student may select one of following:

- (a.) Carpentry and cabinet-making.
- (b.) Pattern making and founding.

- (c.) Blacksmithing.
- (d.) Machine shop work.
- (e.) Management of boilers, engines, dynamos and electric light plants.
- (f.) Actual work of instructing classes in the different shops and in laying out series of exercises.

### V. Drawing.

Selection and use of instruments; lettering; geometrical construction; tracing and blue printing; descriptive geometry and its application; design of machines, steam engines, boilers; maps and topographical drawing; stereotomy and applications; design of roofs and bridges; electrical design, etc. Throughout the course.

# VI. Mechanics (Junior and Senior).

Elementary and analytical treatment of statics and dynamics; resistance of materials; graphical statics; hydraulics; turbines.

# VII. Elements of Mechanism, and Machine Design (Junior).

Theory of motion and velocity ratios; designs of gear wheels, cams, link motions; alignment of shafting; transmission of power by belts, hemp and wire ropes; theory of friction; selection and use of lubricants.

Two hours per week.

# VIII. Steam Engineering (Junior and Senior).

- (1.) The stationary engine: Principles of construction and operation; study or existing types, vertical and horizontal, high-speed and Corliss engines.
- (2.) Pumps: Different types; boiler feed pumps, pulsomeeters, injectors; pumping engines.
- (3.) Boilers: Construction and management; fuel; chimney drast; types, tubular, water tube, sectional; valves and fittings.
- Locomotive Engines: Construction and management; study of forms adapted to different service; link motions; air brake; train resistance; railway practice.
- (5.) Valvegears and governors: Slide valves; Zeuner's and Bilgram's diagrams; movement of valves by eccentric and links; theory, construction and adjustment othrottling, pendulum and shaft governors; balance of reciprocating parts.

(6.) Theory of compound engines: Source of economy; principles of design; distribution of power.

# IX. Masonry Construction (Junior).

Materials; stone and brick masonry foundations. Third term, three hours per week.

## X. Thermodynamics (Senior).

Action of heat on perfect and imperfect gases; hot air, gas and steam engines, injectors; mechanical refrigeration, manufacture of ice. Three hours per week.

# XI. Engineering Laboratory (Junior and Senior.)

Tests of strength and other properties of materials of construction; measurement of friction of belts, gears and lubricants; measurement of power by indicator, brake and dynamometer; boiler tests to determine evaporation of water per pound of fuel; tensile and crushing tests of brick, stone, cement, etc.; tests of dynamos, motors and lamps. Junior, third term, two hours per week; Senior, four hours per week.

## XII. Power Plants (Senior).

- Study of steam and water power plants as illustrated by the best practice; specifications.
- (2.) Study of most approved methods of testing steam and gas engines, turbines, refrigerating machinery, etc.

# XIII. Surveying.

- (1.) Care, use and adjustment of instruments; use of chain, tape, compass, transit, solar attachment, level, sextant and plane table; exercises in land, city and mining surveying. Sophomore.
- (2.) Railroad Surveying: Reconnoissance, preliminary survey, location, profiling, establishing grade, location of curves and turnouts; measurement of embankments and cuts, estimates of volume and mateterial used in construction; location and estimates for tunnels. Junior.
- (3.) Hydraulic and Sanitary Surveying: Location of waterworks, with details of estimates of cost; design and estimate of material required and cost of construction for a complete sewerage system. Senior.

# XIV. Bridges and Roofs (Senior).

Analytical and graphical treatment of different forms used for bridges, highways and depots; design of bridge and roof trusses.

- XV. Sanitary and Hydraulic Engineering (Sen-ior).
  - Study of the separate and combined systems of sewerage; constructive details; designs of a sewerage system.
  - (2.) Location and constructive details of waterworks; standpipes, dams, pumping machinery; design of waterworks.
- XVI. Engineering Structures (Senior).

Study of recent structures, bridges, foundations and tunnels; use of coffer dams, caissons and jetties; specifications.

XVII. Electricity and Magnetism (Junior).

Theory of electricity and magnetism; measurement of resistance, electro-motive force, current; use and calibration of instruments; batteries, electro-magnets, etc.

- XVIII. Dynamo-Electric Machinery (Senior).
  - (1.) Dynamos: Open and closed coil, direct and alternating current, series, shunt and compound wound; characteristic curves; are and incandescent lamps.
  - (2.) Motors: Series and shunt wound, direct and alternating current; stationary and street-car types.
  - Storage Batteries: Chemical action in the cell; construction and use.
  - XIX. (4.) Electric Transmission of Energy (Senior).

    Study of the distribution of electricity; plans and calculations for systems of wiring.
    - XX. Electric Light and Power Plants (Senior).
      - (1.) Study of recent electric light and street railway plants;
         specifications.
      - Study of approved methods of testing the efficiency of light and power plants.
  - XXI. Laws of Business (Senior).

    Study of law of sales, agency, partnership, common carriers, contracts, patents, etc.
  - XXII. Thesis.

    Original work, planned and executed by the students; subject chosen must be covered by previous work and approved by the instructor. One term's work.

### UNIVERSITY OF ARKANSAS LIBRARY

### CHEMISTRY AND PHYSICS.

A. E. MENKE, Professor.

W. B. BENTLEY, Adjunct Professor.

I. (a.) General Chemistry (Sophomore).

Lectures and recitations three times a week first and second terms; five times a week third term. Laboratory work two afternoons weekly throughout the year. Text-books: Richter, Remsen.

(b.) Chemical Philosophy (Sophomore).

Lectures and recitations four times a week in the third term. Text-books: Meyer, Tilden, Ostwald.

(c.) Organic Chemistry (Junior).

Lectures and recitations three times a week throughout the year. Text-book: Richter.

- (d.) Theory of Qualitative Analysis (Junior).

  Lectures and recitations five times a week the first term.
- (e.) Qualitative and Quantitative Analysis (Junior and Senior).

  Practical work four afternoons per week throughout both years.
- (f.) Technical Chemistry (Senior).

  Lectures and recitations three times per week throughout the year. Text-books: Ost, Sadtler.
- II. (a.) General Physics.

Lectures and recitations four times a week throughout the year. Laboratory work one afternoon per week. Text-book: Ganot.

(b.) Heat (Sophomore).

Lectures and recitations three times, laboratory work once weekly throughout the year. Text-book: Balfour Stewart.

III. (a.) Mineralogy (Junior).
Practical work daily during the second term.

(b.) Metallurgy (Senior).

Lectures and recitations three times a week throughout the year. Text-books: Bell, Bloxam, Phillips.

### MATHEMATICS.

O. C. GRAY, Professor.

G. W. DROKE, Adjunct Professor.

This subject should be taught both practically and logically, thus promoting scientific investigation and mental discipline. It is not enough to find "answers," but the deductions must be based on established principles. First, the pupil performs the work in imitation of the teacher or author; then comparing facts learned, he reasons on the subject, consults the text and book of reference, makes the deduction, and applies the law to new cases. The power of original investigation and the faculty of invention are thus strengthened, and the student, by the inductive process of combining known principles and making new deductions, can anticipate the author in his demonstrations.

It is desirable that all students should supply themselves with drawing instruments; for much attention is paid to original investigations, in which at least the dividers and protractor are essential.

The course of study in mathematics embraces algebra, geometry, trigonometry, analytical geometry, descriptive geometry, solid geomety, calculus; higher trgionometry and surveying; theory of equations; determinants; mathematical astronomy; theory of least squares and quaternions.

#### ALGEBRA.

Embraces the elementary principles; equations, simple and quadratic; ratio, proportion, progression, inequation and differentiation; indeterminate co-efficients; binomial theorem; development of functions; logarithms; indeterminate analysis; Sturm's theorem and Horner's method of solving higher equations.

#### GEOMETRY.

Embraces the treatment of straight lines, angles and polygons; proportion, with its application to geometrical investigation; the circle and the theorems dependent upon its prop-

erties; proportions and measurement of polygons and circles; intersections and relative positions of planes; solid and spherical geometry, and under the subjects, a variety of orginal and practical problems for class work.

#### TRIGONOMETRY.

This study embraces general propositions in plane trigonometry; equations for sines, cosines, etc.; the use of logarithms; applications to problems in surveying and navigation; oblique and right-angled spherical triangles and their projection; Napier's circular parts and analogies; application of spherical triangles to problems in latitude, longitude and time, etc.

### ANALYTICAL GEOMETRY.

This study embraces loci and their equations; the straight line; the circle; systems of co-ordinates; the parabola; the ellipse; the hyperbola; higher plane curves; the point, right line, the plane and surfaces of revolution as treated in the geometry of three dimensions.

#### CALCULUS.

Embraces the differentiation of algebraic, exponential, logarithmic, trigonometrical and circular functions: successive differentiations; differential co-efficients; implicit and compound functions; Maclaurin's formula; Taylor's formula; evolutions of indeterminate expressions; maxima and minima of functions of one variable; elementary rules of integration; subordinate circular forms; separation by indeterminate co-efficients; rationalization; formula for integration by parts; integration by infinite series; successive integration method of disposing of the constant of integration.

By examination of the various courses it will be seen that mathematics, to include trigonometry, is required in all of them; that the studies are so arranged any student may read mathematics to the close of his senior year; that students in the engineering courses are required to read pure mathematics to include in agra calculus.

In what is known as the Mathematical Course looking to the

degree of B. A. (see p. 88), mathematics, includes advanced algebra two (2) hours, and analytical geometry three (3), hours each week during the first and second terms of the Sophomore year and calculus five hours each week during third term of Sophomore year, and fours each week during the first and second terms of the Junior year. Besides these prescribed subjects the student is permitted and advised to take any or all of the following subjects:

Theory of equations and determinants during the first term; advanced analytical geometry and mathematical astronomy during the second term, and theory of least squares and quarternians during the third term of the Senior year.

### BIOLOGY AND GEOLOGY.

J. F. McNEILL, Professor.

S. E. MEEK, Adjunct Professor.

I. General Biology (Freshman).

A study of typical species of plants and animals, with reference to structure, development and relationship. Recitations twice a week. Laboratory work four hours a week. Throughout the year.

II. (a.) Morphology and Classification of Flowering Plants.

Lectures or recitations twice a week. Laboratory work four hours a week. Throughout the year.

- (b.) Cryptogamic Botany.

  Lectures or recitations twice a week. Laboratory work
  four hours a week. First term.
- (c.) Bacteriology.

  Laboratory work four hours a week. Third term.
- (d.) Physiological Botany.

  Lectures three times a week. Laboratory work four hours a week. Second and third terms.
- (e.) Advanced Botany.

  Reading and laboratory work. Throughout the year.
- III. (a.) Systematic Zoology.
  Lectures twice a week. Laboratory work in the classification of birds, mammals, reptiles and fishes, four hours a week. First and second terms.

### (b.) Comparative Anatomy.

Lectures twice a week. Laboratory work four hours a week. Third term.

# (c.) Comparative Anatomy of the Brain.

This is a preparatory course for Psychology. Lectures and laboratory work three hours a week. Third term.

# (d.) Hygiene.

Ten lectures for students in collegiate classes. First term.

### (e.) Histology.

Lectures three times a week. Laboratory work four hours a week. First and second terms.

# (f.) Embryology.

Lectures three times a week on general Embryology. laboratory work\* on the development of the chick, four hours a week. Third term.

### (g). Advanced Zoology.

Reading and laboratory work, eight hours a week.

Throughout the year.

### IV. (a.) Structural Entomology.

Lectures three times a week, Laboratory work four hours a week. First term.

# (b.) Systematic Entomology.

Lectures three times a week. Laboratory work four hours a week. Second and third terms.

# (c.) Economic Entomology.

Reading and laboratory and field work. Throughout the year.

# V. (a.) General Horticulture.

Lectures three times a week. Laboratory and field work four hours a week. Throughout the year.

# (b.) Practical Horticulture.

Reading and experimental work. Throughout the year.

# VI. General Geology.

Structural, dynamical and physical and survey methods.

Recitations and lectures three times a week. First
and second terms. Field work and laboratory practice four hours a week.

VII. Economic Geology.

Ore deposits and valuable rock material, three times a week. Third term. This course follows Course VI, and is designed for civil and mechanical engineers and for students in chemistry.

VIII. Historical Geology.

Three times a week. Laboratory practice four hours a week. First and second terms.

IX. Paleontology.

Five times a week. Third term. Lectures and laboratory practice.

X. Agricultural Geology.

Lectures and recitations three times a week. Field and laboratory work four hours a week. This course follows course VI, and is designed for students in agriculture.

### PSYCHOLOGY AND ETHICS.

E. H. MURFEE, Professor.

These studies are taught inductively, no theory or doctrine being urged for acceptance which is not based upon a philosophical induction. The student is taught to subject every statement of fact or principle to the test of his own experience. The fullest and freest discussion of opposing views is encouraged. Recent researches in Physiological Psychology receive special attention. As a basis of this work the Professor in Biology will give lectures and laboratory practice in Neurology. All students whose courses require Psychology must attend the lectures in Neurology during the third term of the Junior year.

- I. Psychology (Senior).

  Three times a week throughout the year.
- II. Ethics (Senior).

  Three times a week for third term.

### ENGLISH AND MODERN LANGUAGES.

R. H. WILLIS, Professor, E. H. CARNALL, Adjunct Professor.

The subjects taught for undergraduates are the English (including Anglo-Saxon), German, French and Spanish languages and their histories and literature. Italian will also be taught for music students and others, when the demand is sufficient.

In the lower classes for each language the aim is to acquire a practical and accurate use of the language as it exists today; and the only proper basis for this is an exact knowledge of grammatical forms and of the elementary principles of syntax. In the higher classes the languages are studied historically and philologically with a view to general culture and to the best mental discipline.

Every student has the opportunity to become thoroughly acquainted with the English language, to learn to speak it and to write it correctly and forcibly. In the foreign languages the first and constant aim is a correct pronunciation and excellence in translation and composition; but the syntactical and etymological relations existing between these languages and the English are emphasized, and they are thus constantly contributing to the student's knowledge of English and to his power of expression. Besides the above instruction there are, in each foreign language, additional recitations devoted wholly to conversation and sight reading.

Spanish takes the place of French for any beginning class which desires this substitution; but both these languages may be taught the same year, if there are as many as five students desiring to begin each in the Freshman class.

The following are the courses for 1893:

I. Rhetoric and English Classics (Freshman).

Raub's Rhetoric (two terms); Macaulay's Essay on Milton and selections from Irving and Hawthorne (third term); ten essays (chiefly narrative and descriptive) criticised and corrected by the instructor and copied by the student; thorough drill in English metres. For

reference: Bain, Blair, Clark, Hart, Hill, Genung, Kames. Three times a week.

### II. English and American Literature (Junior).

- (a.) History of English and American Literature from earliest period to present day; Shaw's New History of English and American Literature with parallel reading of authors, and references to Taine, Morley, Welsh, Arnold, Minto, and others. Once a week.
- (b.) English masterpieces read and critically studied; historical and critical essays. Kitchin's Spenser; Hale's Longer English Poems and critical editions of other authors. Twice a week.
- (c.) Chaucer and Shakespeare read and critically studied. Morris Chaucer; Rolfe's Plays of Shakespeare, and other annotated editions; critical and historical essays. Once a week.

# III. Early English and Philology (Senior).

- (a.) Anglo-Saxon and Middle English; Anglo-Saxon Grammar and readings from the Gospels and Chronicles; selections from Alfred, Ælfric, Caedmon, and other writers. Cook's Siever's Grammar of Old English; Bright's Reader; Morris's Selections from Middle English, Part I; Long's Early English Literature. For reference: Bosworth's Anglo-Saxon Dictionary; Mayhew and Skeat's Dictionary of Middle English; Ten Brink's Old English Literature; March's Anglo-Saxon Grammar. Three times a week.
- (b.) English Philology. Lounsbury's History of the English Language with references and lectures. For reference: Skeat's Etymological Dictionary; Mayhew's Synopsis of Old English Phonology; Sweet's Handbook of Phonetics; Earle, Whitney, Max Muller, and Marsh. Once a week.
- IV. Advanced Anglo-Saxon and English Philology (Graduate).

Cook's Siever's Grammar; March's Grammar; Critical Study of Alfred's Orosius, of Andreas, of Beowulf, of Caedmon's Genesis, and of Judith; Ten Brink's O. E. Literature; English Philology. For reference same as III. At the convenience of the professor.

V. Gothic and Germanic Philology (Graduate).
Wright's Primer of Gothic or Balg's Translation of Braune's Gotische Grammatik; Heyne's Ulfilas or

Balg's Gothic Literature (containing Ulfilas); Douse's Introduction to the Gothic of Ulfilas; Balg's Comparative Glossary of Gothic; Kluge's Etymological Dictionary; Skeat's Etymological Dictionary; Paul and Braune's Grundriss. At the professor's convenience.

VI. Modern English Literature (Graduate).

Critical study of the life and works of Scott, Byron, Burke, Carlyle, Thackeray and Tennyson. At the professor's convenience.

VII. American Literature (Graduate).

Critical study of the life and works of Irving, Poe, Longfellow, Emerson, Hawthorne and Sidney Lanier. At the professor's convenience.

VIII. Modern German, Elementary (Junior).

The Joynes-Meissner Grammar with composition; Brandt's Reader, containing selections from the simple prose of Grimm, Niebuhr and late authors, and from the lyrics of Goethe, Schiller, Heine, Uhland and other poets; five lyric gems memorized. Four times a week. Conversation and sight reading may be given once a week.

IX. Classic German (Senior).

The critical study of German classics; Schiller's William Tell; Goethe's Egmont and Sesenheim; Lessing's Nathan der Weise; grammar and composition continued; original composition; Conant's German Literature with references to Scherer's Literature and to other larger works. For reference: Whitney's and Brandt's Grammars; Behaghel's Historical Grammar; Jagemann's Syntax; Heath's Dictionary. Four times a week.

X. German at Sight and Conversation (Senior).

Stern's Studien und Plaudereien; Dreyspring's First
Reader; Storm's Immensee; Schiller's Der Nesse als

Onkel; Einer Muss Heirathen; Eigensinn. Twice a

XI. Graduate Courses in German.

One of the following courses of one year each may be taken at the professor's convenience: (1) Life and works of Goethe, (2) of Schiller, (3) of Lessing, (4) Old and Middle High German, (5) Gothic and Germanic Philology.

XII. Modern French, Elementary (Freshman and Sophomore).

Edgren's Grammar with composition; Super's Reader, containing simple prose tales and extended selections from Daudet, Dumas, Erckmann-Chatrian, Xavier de Maistre and a few lyrics from Victor Hugo, Beranger, Émile Souvestre and other poets. Four times a week. Conversation and sight reading may be given once a week.

XIII. Classic Freenh (Sophomore).

The critical study of French classics; Corneille's Cinna; Racine's Athalie; Molière's Les Précieuses Ridicules and Le Médécin Malgré Lui; Victor Hugo's Hernani; grammar and composition continued; original composition; Saintsbury's Primer of French Literature with references to his larger work. For reference: Whitney's Grammar; Harrison's French Syntax; Brachet's Historical Grammar; Heath's French Dictionary or the Classic French Dictionary. Four limes a week.

XIV. French at Sight and Conversation (Sophomore),

Étude Progressive de la Langue Française; Fortier's-Sept Grands Auteurs; Madame de Genlis's Le Siège de la Rochelle; George Sand's La Mare au Diable.

XV. Graduate Courses in French.

One of the following courses of one year each may be taken at the professor's convenience: (1) Life and Works of Molière, (2) of Corneille and Racine, (3) of Voltaire, (4) of Victor Hugo, (5) Old French.

XVI. Modern Spanish (Freshman).

Edgren's Spanish Grammar with composition; Worman's First Spanish Book; Knapp's Spanish Readings, containing extracts from Fernan Caballero, Burgos, Castelar and other authors. Four times a week. Conversation and sight reading may be given once a week.

XVII. Classic Spanish (Sophomore).

The critical study of Spanish classics: Selections from Don Quixote; Lope's La Estrella de Sevilla; Calderon's El Principe Constante; Spanish Literature; grammar and composition continued; original com-

position. For reference: Knapp's Grammar; Becker's Spanish Idioms; Ticknor's History of Spanish Literature; Sismondi's Literature; Velasquez's Dictionary. Four times a week.

XVIII. Spanish at Sight and Conversation (Sophomore).

Worman's Second Book; Colmena Espanola; Caballero's La Familia de Alvareda; Knapp's Readings. Twice a week.

XIX. Italian.

Grandgent's Grammar with composition; Foresti's Reader; Sonzogno's Letteratura Italiana; Nota's La Fiera; Ongaro's Rosa dell' Alpi; Tasso's Gerusalemme Liberata. For reference: Cuore's Grammar; Sismondi's Literature; Dictionary, Millhouse or Baretti. At the professor's convenience.

### ANCIENT LANGUAGES.

C. H. LEVERETT, Professor.

The subjects taught in this department are the Latin Language and Literature and the History of Rome, the Greek Language and Literature and the History of Greece. Authors are read in the order of their difficulty, and neatly written translations are required at stated intervals. The grammar and idioms of these languages are carefully studied and compared with those of English and other languages.

Marked attention is paid to the rendering of English into Latin and Greek. In the lower classes the best manuals for Latin and Greek composition are used; for the higher classes carefully graded exercises are prepared by the professor.

Due prominence is given to the study of Latin and Greek metres and to sight-reading. The grammars are made the basis of this instruction, but fuller explanation is given in lectures.

Gildersleeve's Grammar with the Roman method of pronunciation is used throughout the course in Latin, and Goodwin's Grammar in Greek.

I. Cæsar, Cicero and Virgil (Freshman).

One book of Cæsar (Kelsey's); fifty pages of Cicero's Orations (A. and G.); two books of Virgil's Æneid; selections from Smith's Smaller History of Rome; Jones' Latin Prose Composition (twenty lessons). Four times a week.

II. Virgil, Horace and Livy (Sophomore).

Two books of the Eneid and selections from the Eclogues; Odes of Horace (McLean's); fifty pages of Livy (Lincoln's); Jones' Latin Prose Composition completed. Four times a week.

III. Livy, Horace, Tacitus (Junior).

Sixty pages of Livy; 1500 lines Satires and Epistles of Horace; 100 pages of Tacitus; Allen's Latin Composition. Four times a week.

IV. Cicero, Juvenal, Roman Literature (Senior).

The moral works of Cicero, Leverett's or MacLean's
Juvenal; Roman Literature. Four times a week.

Note.—(1.) Original exercises in Latin prose composition will be required throughout the year. Also sight reading.

(2.) Other authors may occasionally be substituted for those above when a change seems beneficial: e. g., Sallust, Ovid, Catullus, Tibullus, Propertius, Pliny, Plautus, Terentius.

BOOKS OF REFERENCE.—Harper's Latin-English Lexicon, White's English Latin Lexicon, Classical Dictionary, Classical Atlas and Zumpt's, Madvig's and Roby's Latin Grammars.

V. Graduate Courses in Latin.

One or two of the following courses of one year each are offered to graduate students for 1892: (1.) The complete works and the life of Virgil and Lucretius, (2) of Sallust and Tacitus, (3) of Livy, (4) of Catullus, Tibullus, Propertius and Ovid, (5) of Cicero, (6) of Terence, Plautus and early authors, (7) of Seneca and Quintilian, (8) of Suetonius and Pliny the Younger. With each of these courses there is collateral work in history, archæology, etc.

VI. Elementary Greek (Freshman).

Goodwin's Grammar, Frost's Gr. Primer. Six chapters Zenophon,s Anabasis (Kelsey). Four times a week. VII. Xenophon and Lysias (Sophomore).

Grammar continued, three books of Xenophon's Anabasis; three Orations of Lysias; Jones' Prose Composition; sight reading. Four times a week.

VIII. Herodotus, Homer and Demosthenes (Junior).

Forty pages of Herodotus (Mather); three books of Homer's Iliad; forty pages of Demosthenes; selections from Plato; Jones' Prose Composition completed; sight reading. Four times a week.

IX. Thucydides, Euripides and Sophocles (Senior),

Greek Literature; one book of Thucydides; two plays of Euripides; two plays of Sophocles; Greek Literature. Four times a week.

NOTE.—(1. Original exercises in Greek composition are required during the Senior year, also sight reading.

(2.) Other authors may be substituted for those given.

BOOKS OF REFERENCE,—Liddell and Scott's Greek-English Lexicon (7th Oxford Edition), Yonge's English-Greek Lexicon, Classical Dictionary, Classical Atlas, Goodwin's Moods and Tenses, Hadley's and Curtius' Grammars.

X. Graduate Courses in Greek.

One or two of the following courses of one year each are offered to graduate students for 1892: (1) The life and complete works of (1) Sophocles and Œschylus, (2) of Euripides, (3) of Aristophanes, (4) of Homer, (5) of Herodotus and Thucydides, (6) of Demosthenes, (7) of Plato, one-half of his works; (8) of Aristotle, one half of his works. With each of these courses there is a collateral work in history, archæology, etc.

### HISTORY AND PEDAGOGICS.

J. F. HOWELL, Professor.

#### HISTORY.

The leading schools of the country are recognizing more and more distinctly the importance of history as a factor not only in a liberal education, but in all courses of study designed to fit the young for right and successful living, especially in a great republic such as ours, where every man is directly interested in good government. It has well been said that "when we reflect that what men think of the world depends on what they know of it, it is not surprising that the wider altruistic and ethical interests, which it is the special function of history to develop, rarely become strong enough to control narrower and more isolated and selfish aims in life." It is further recognized that if students are left to themselves to learn history by simply reading it when convenient, little is to be expected. Only by careful study with a competent instructor can the best practical results be obtained.

For the coming year several new courses are offered. Instruction is given by lectures and text-books to Freshmen and Sophomores, but mainly by lectures in the advanced work, independent thought and investigation being encouraged throughout. The Library is fairly well supplied with standard historical works, and additions are being constantly made. Geography including map-drawing receives due attention, it being held that "historical instruction, without the constant accompaniment of geography, has no solid foundation."

Chronology is made prominent for the purpose of comparison and reasoning, and the preparation of synchronistic charts is required.

I. Constitutional History (Freshman or Sophomore).

Government and its origin. Development of the English Constitution. Growth of the "American Idea" among the colonies. Analysis of our National Constitution. Progress of the American Republic. Political parties. Government and Administration in the United States, National, State, and Municipal. Constitution of Arkansas. Parliamentary Law. Twice a week.

II. General History (Sophomore).

Races of mankind. The eastern nations. Greece. Rome. The Dark Ages, A. D. 476—1096. The Middle Ages, A. D. 1096—1492. Modern history to the present time. Three times a week.

III. English History (Sophomore).

With special reference to the development of the English language and literature. Legendary period. Formative period, people, language and literature. Initiative period. Retrogressive period. First creative period. Philosophic period. Once a week.

IV. Ancient History (Junior).

In the light of recent discoveries and investigations.

The Aryans. Eastern monarchies. Greeks and Romans. Twice a week.

V. European History (Senior).

From the fall of Rome to the present time. Connection between ancient and modern history. Rise of the new nationalities. Influences leading to the Renaissance. The struggle between Christianity and Mohammedanism. The Reformation. Growth of religious and political liberty. Twice a week.

VI. American History (Senior).

Ancient America. Pre-Columbian voyages. Development of the United States, social, political and industrial. Growth and influence of the nation. Canada, Mexico and the South American States. Twice a nucek.

### PEDAGOGICS.

I. Pedagogy (Freshman).

Elements of Psychology. Principles of teaching. General methods. Methods of teaching special branches. Moral training. Twice a week.

II. School Management (Sophomore).

Instrumentalities. Organization. Courses of study. Classification. Discipline. Three times a week the first term and continuing into the second term.

# III. History of Education (Sophomore).

The oriental nations. Ancient classical nations. Education during the Middle Ages. Modern theories and systems. Kindergarten and manual training schools. Twice a week, second and third terms.

# IV. School Law (Sophomore).

Decisions of State Supreme Courts on questions relating to the rights and duties of school officers, parents and children. The school laws of Arkansas. Once a week, third term.

### ELOCUTION.

JESSIE L. CRAVENS, Instructor.

The object of this department is a harmonious development of both mind and body along those lines of culture that lead to power and refinement of speech and action.

Art predetermines her effects. To know what and how to do precedes the doing. A complete course of technical drill lays the foundation for advanced work in expression. An artistic presentation can come only through a perfected technique, and that is attained only by constant practice in voice exercises, articulation and action. The true states of the soul may then be expressed through the trained body; vital, through voice; mental, through articulatory speech; emotive, through action.

The course of instruction comprises a thorough training in the essentials of expression.

# 1. Physical Training.

The course includes thorough drills in:

- t. Light Gymnastics,To promote health,To give vigor and tone.
- Aesthetic Gymnastics,
   (In acccordance with the laws of Delsarte)
   For the attainment of grace, precision and harmony
   in action.

# II. Voice Culture.

Respiration.
 To breathe naturally. Economy of breath. Drills

in deep, effusive, expulsive and explosive forms, as a basis for voice work.

#### 2. Voice.

Exercises for the production and cultivation of open, pleasing and musical tones. To avoid shrill and loud tones.

### 3. Articulation.

To acquire a correct use of the articulatory organs. Exercises upon elementary sounds, separately and in combination. Syllabication, accent, and pronunciation. Defects of speech.

### III. Expression.

Modulation, inflection, emphasis, pitch, quantity and movement. Qualities. Application of tone effects. Light and shade in tone. Transitions. Pause effects. Facial expression. Action and repose. Naturalness. Clearness.

To analyze the sentence for the thought and feeling contained therein, and to produce it in correct and artistic form.

#### TEXT-BOOKS.

The books in use and for reference are Southwick's Elocution and Action, Stebbins' System of Expression, Adams' Gesture and Pantomimic Action, Werner's Readings and Recitations, etc.

Instruction is given chiefly by lecture, no special text being strictly adhered to, but always supplemented by the voice of the teacher.

This department is open to all students in the Collegiate and Sub-Freshman classes. Twice a week.

### MILITARY DEPARTMENT.

ROBT. W. DOWDY, 1st Lieut. 17th U. S. Infantry.

Professor of Military Science and Tactics.

This department is in charge of the United States Army officer detailed by the War Department for duty at the University.

All male students of the University over 15 years of age are required to drill because the act of Congress appropriating lands to establish the University provides that the leading



ARMORY.

branches taught shall be "Military Science and Tactics," in addition to the usual course of study prescribed in universities.

The system of drill used closely follows that in the United States Army. It contains a course of gymnastic exercises for the development and improvement of the arms, chest, legs, hands and feet, which is unexcelled.

Besides being the perfection of physical training, the drill has many advantages mentally. The necessity of being alert,

listening for each word of command and acting promptly on it quickens the wit and cultivates the habit of fixing the attention and concentrating the thoughts. Thus the student is improved mentally and physically by every drill.

One hour per week is devoted to theoretical instruction of collegiate students in the art and science of war, and three hours per week to practical instruction of all cadets in the school of the soldier, of the company and of the battalion, including such ceremonies as guard mounting, dress paradeletc.

The cadets are organized into companies, and the companies into a battalion, which is annually mustered into the service of the State, and forms the 1st Battalion of the State Guard.

Though every male student over 15 years of age is required to drill and to be a member of one of the cadet companies, no student will be mustered into the service of the State if his parent or guardian objects.

The officers and non-commissioned officers are selected from the collegiate students for proficiency in drill and military studies and general good conduct. An office in the battalion is one of merit and distinction; any unbecoming conduct will subject the appointee to reduction to the ranks.

A competitive drill is held each year; the winning company carries the colors for the ensuing year, and a gold medal is awarded the best drilled cadet.

#### IMPORTANT.

The three students of the Senior Class having the highest grade of merit in this department will be reported to the Secretary of War and their names recorded in the Adjutant General's office and published in the Register of Officers of the United States Army for that year. The President of the United States in appointing officers of the army gives preference to cadets so reported.

In connection with the battalion there is a military band, which is composed of cadets, not to exceed twenty, who can perform on a band instrument, or who show an aptitude an



BATTALION.

desire to learn. The band receives the best instruction attainable, practices three times a week, and performs at all military ceremonies. The instruments are furnished by the government and are of the best make and most improved pattern.

A neat uniform of gray cloth, with brass buttons and black trimmings, is required to be worn at all drills. The suit complete costs from \$14 to \$18, and with ordinary care will last a year, being cheaper in the end than clothing ordinarily worn by students. Parents will save money by postponing the purchase of uniforms for their sons until they arrive in Fayette-ville.

ROSTER OF OFFICERS AND NON-COMMISSIONED OFFICERS FOR 1892.

### FIELD, STAFF AND BAND.

1 .....andant

Robert W. Dowdy (1st Lieutenant 17th U. S. Infantry)

Third LieutenantS. L. Morley
First SergeantJ. C. Purdy
Second Sergeant O. S. Burrow
Third Sergeant E. L. Mock
Fourth SergeantS. E. Mitchell
Fifth Sergeant J. E. Martineau
CorporalJ. W. Hicks
Corporal
CorporalA. J. Myar
COMPLIANT - CA
COMPANY "C."
Captain
First LieutenantL. R. Ash
Second LieutenantJ. F. Moore
Third LieutenantJ. H. Moore
First Sergeant
Second SergeantJ. H. Vandevanter
Third Sergeant
Fourth Sergeant
Fifth Sergeant Earl Gallaway
Corporal J. H. Davis
Corporal
Corporal

# MUSIC DEPARTMENT.

### PIANO-FORTE COURSE.

#### FIRST GRADE.

Elementary exercises; Duets and studies from Lebert and Starke's Piano-Forte School, Part I. Loeschhorn Op. 38 and 56, and Koehler Op. 50.

### SECOND GRADE.

Lebert and Stark's Plano-Forte School, Part II. Clementi's Sonatinas. Heller's Studies, Op. 47, Loeschhorn Op. 66, Bertini Op. 29 and 32, and Czerny's School of Velocity.

#### THIRD GRADE.

Lebert's and Stark's Piano-Forte Schoo!, Part III. Loeshhorn Op. 67, Kuhlau's Sonatinas, Bach's Inventions and Czerny Op. 740.

#### FOURTH GRADE.

Heller's Art of Phrasing, Moscheles Op. 70 and 73, Kullak's Octave Studies, Clementi's Gradus ad Parnassum and Haydn's Sonatas.

#### FIFTH GRADE.

Cramer's Studies, Bach's Preludes and Fugues, Koehler Op. 120, Chopin Op. 25 and Beethoven's Sonatas.

Selected sections of Piaidy's Technics and Mason's Touch and Technics used all through the course.

### VOCAL.

#### FIRST GRADE.

Lessons in breathing, production of tone and development of voice, slow trill and slow legato roulades, easy solfeggios and easy songs.

#### SECOND GRADE.

Study of intervals with portamento, diatonic and chromatic scales, roulades in moderate movement, arpeggios, solfeggios, songs and ballads.

#### THIRD GRADE.

Study of major and minor scales, trills and roulades in rapid movement, solfeggios of difficulty, study of embellishments, and arias and cavatinas from modern operas.

### VIOLIN.

#### FIRST GRADE.

Henning's Practical School, Parts I and II; Kayser, Op. 20, Book I, and Blumenstengel's Scales and Exercises of Velocity, Book I.

#### SECOND GRADE.

David's Method, Part II; Kayser, Op. 20, Book II; Blumenstengel's Op. 33, and Scales and Exercises of Velocity, Book II.

### THIRD GRADE.

Kreutzer's Forty Etudes and Fiorillo's Thirty-six Etudes.

Solos and duets, adapted to the student, used all through the course.

#### TERMS:

Twelve weeks-two lessons per week.

Vocal Culture\$12 50
Piano-forte and Organ 12 00
Violin and other stringed instruments 12 00
Cornet and other brass instruments 12 00
Clarinet and flute 12 00
Thorough Bass and Harmony 5 00
Use of Piano one hour every day 2 35
Tuition payable in advance.

No deduction will be made on account of absence from recitations except in case of prolonged sickness.

### THE SCHOOL OF AGRICULTURE.

#### FACULTY.

- E. H. MURFEE, President.
- A. E. MENKE and W. B. BENTIEY, Chemistry, Physics and Agriculture.
- O. C. GRAY and G. W. DROKE, Mathematics.
- JEROME MCNEIL and S. E. MEEK, Biology.
- R. H. WILLIS and EILA CARNALL, English.
- R. W. DOWDY, Military Science and Tactics.
- R. R. DINWIDDIE, Veterinarian of the Agricultural Experiment Station.
- W. F. BATES, Foreman of the Farm and Instructor in Dairying.
- J. M. Moore, Assistant Foreman of the Farm.

(REQUIREMENTS FOR ADMISSION.)

(See Pages 37-41.)

### COURSE IN AGRICULTURE,

The School of Agriculture is designed and organized to give both theoretical and practical instruction in the various branches of agriculture. Special preparation is needed no less for the pursuit of agriculture than for law, medicine or divinity; the method of instruction now employed is class-room work. accompanied by practical demonstrations in the field, dairy and laboratories. The equipment for practical work will compare favorably with those of other agricultural colleges; the machinery is new and of the most improved pattern, all selected with a view to their economic value. The dairy has been recently fitted up with Laval's separator and other necessary implements. We have a large vineyard and orchard for practical horticultural work; a herd of pure stock of different breeds. so that the students can be instructed in the work that occurs on either a stock, dairy, fruit or cropped farm. A feature of considerable interest has recently been added by the Board of Trustees—prize crop and dairy competitions—this has been a means of exciting the interest of students to a high degree.

The following is a detailed description of the instruction given in the course. The purely agricultural classes in the course are agriculture, horticulture, stock-breeding, stock feeding, agricultural chemistry, veterinary anatomy, veterinary science. The various closely related branches are also provided for, as may be seen in the schedule.

### FARMER'S COURSE FOR CERTIFICATE IN AGRICULTURE.

#### FRESHMAN CLASS.

\*Biology, 3; Physics, 4; English, 3; Mathematics, 5.

#### SOPHOMORE CLASS.

FIRST TERM.	SECOND TERM.	THIRD TERM.
Veterinary Anatomy, 5.	Veterinary Science, 3.	Veterinary Science, 2.
	Agriculture, 2.	Agriculture," 1.
Horticulture, 4.	Dairy Husbandry, 4.	Dairy Husbandry, 4.
Stock Breeding, 3.	Stock Breeding, 3.	Stock Breeding, 3.
General Chemistry, 3.	General Chemistry, 3.	General Chemistry, 5.

Students who have completed this course may take the Junior and Senior years in the College of Science and graduate with the Degree of Bachelor of Science.

### MECHANIC ARTS AND ENGINEERING.

### FACULTY.

E. H. MURFEE, President, Political Economy.

C. V. KERR, Mechanical Engineering, Superintendent Mechanic Arts.

A. E. MENKE and W. B. BENTLEY, Chemistry and Physics.

O. C. GRAY and G. W. DROKE, Mathematics.

JEROME MCNEIL and S. E. MEEK, Biology and Geology.

R. H. WILLIS and E. H. CARNALL, English.

J. F. HOWELL, History and Pedagogics.

R. W. Dowdy, Military Science and Tactics.

G. C. Schoff, Civil Engineering.

H. B. SMITH, Electrical Engineering.

S. L. GRINSTEAD, Wood-shop.

WILLIAM M. GILMORE, Foundry and Forge Shop.

MACK MARTIN, Machine Shop.

JESSIE L. CRAVENS, Elocution. V

HENRY V. CAWOOD, Engineer.

REQUIREMENTS FOR ADMISSION.

(See Pages 37-41.)

### GENERAL DESCRIPTION OF COURSES IN ENGINEERING.

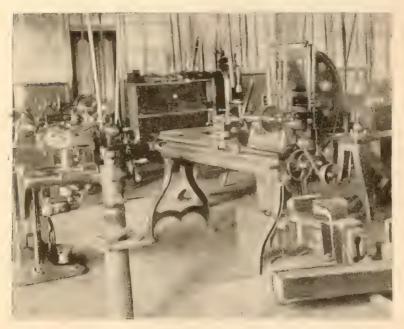
MECHANICAL ENGINEERING may be defined as being the application of mathematics to science, with particular reference to the design and fabrication of all forms of machinery, and

The figures following each subject in the courses denotes the number of recitations per week in that subject, the length of recitation being one hour, except in practical work, in which the period is usually two hours.

the use of steam and water as motive powers. Since engineering is the combined science and art of utilizing the forces and materials of nature, and since this utilization is accomplished in nearly all cases by machines, or by processes working through machines, it is evident that mechanical engineering is the basis of all art and industry.

CIVIL ENGINEERING embraces the location and construction of railroads, canals, waterworks, sewerage systems, foundations on land and in water, tunnels and superstructures; the surveys, improvements and defenses of coasts, harbors, rivers and lakes; the application of mechanics, descriptive geometry and graphics to the design and construction of arch bridges, roofs, truss and suspension bridges; irrigation and drainage of lands; and the preparation of forms of specifications and contracts.

ELECTRICAL ENGINEERING deals with the design and construction of dynamos and motors; the distribution of electricity for use in illumination, or for driving machinery; the construction and operation of electric railways; the erection and man-



MACHINE SHOP.

agement of telegraph and telephone lines; and with electrolysis and welding of metals.

The courses of engineering offered are designed to supply not only mental training but the means for insuring a livelihood in the professions to which they lead. It believed that the most efficient way to teach theory is to unfold it to the student only so fast as he can apply it to the practical work of his course. He thus makes it his own, and theory becomes practice.

# CIVIL, MECHANICAL AND ELECTRICAL ENGIN-EERING.

#### FRESHMAN CLASS.

First Term\_Algebra, 5; English, 3; Physics, 4; Machine Shop Practice, 1; Physical Laboratory, 1; Drawing, 2; Shop Work, 4.

Second Term—Solid Geometry, 5; English, 3; Physics, 4; Physical Laboratory, 1; Machine Shop Practice, 1; Drawing, 2; Shop Work, 4.

Third Term--Plane Trigonometry, 5; English, 3; Physics, 4; Machine Shop Practice, 1; Physical Laboratory, 1; Drawing, 2; Shop Work, 4.

#### SOPHOMORE CLASS.

First Term—Trigonometry, 5; Descriptive Geometry, 1; General Chemistry, 3; Heat, 2; Surveying, 3; Chemical Laboratory, 2; Physical Laboratory, 1; Surveying Practice, 1; Drawing, Descriptive Geometry, 1.

Second Term—Analytical Geometry, 5; General Chemistry, 3; Heat, 2; Surveying, 2; Chemical Laboratory, 2; Physical Laboratory, 1; Surveying Practice, 1; Drawing, Descriptive Geometry, 1.

Third Term, for Civil Engineers—Analytical Geometry, 2; Differential Calculus, 3; General Chemistry, 5; Highways, 2; Mine and Topographical Surveying, 2; Surveying Practice, 2; Chemical Laboratory, 2; Drawing, Descriptive Geometry, 1.

Third Term, for Mechanical and Electrical Engineers—Analytical Geometry, 2; Differential Calculus, 3; General Chemistry, 5; Highways, 2; Light, 2; Chemical Laboratory, 2; Physical Laboratory, 1; Drawing, Descriptive Geometry, 1.

# MECHANICAL ENGINEERING COURSE FOR DEGREE OF B. M. E. JUNIOR CLASS.

First Term—Differential Calculus, 3; Analytical Chemistry, 4; Steam Engineering, 3; Elementary Mechanism, 2; Political Economy, 2; Chemical Laboratory, 2; Drawing, 2.

Second Term—Integral Calculus, 4; Elementary Mechanics, 3; Steam Engineering, 3; Machine Design, 2; Political Economy, 2; Chemical Laboratory, 2; Drawing, 2.

Third Term—Statics and Dynamics, 5; Machine Design, 2; Steam Engineering, 3; Masonry Construction, 3; Political Economy, 2; Chemical Laboratory, 2; Drawing, 2; Engineering Laboratory, 1.

#### SENIOR CLASS.

First Term—Thermodynamics, 3; Strength of Materials, 5; Metallurgy of Iron and Steel, 3; Valve Gears, 2; Experimental Engineering, 2; Engineering Laboratory, 2; Drawing, 2.

Second Term—Thermodynamics, 3; Fly Wheels and Reciprocating Parts, 2; Hydraulics, 5; Railway Practice, 5; Drawing, 2; Engineering Laboratory, 2.

Third Term—Mechanical Refrigeration, 3; Turbines, 2; Laws of Business 3; Power Plants and Specifications, 2; Engineering Laboratory, 2; Drawing, 2; Governors, 3; Thesis Work.

#### CIVIL ENGINEERING COURSE FOR DEGREE OF B. C. E.

### JUNIOR CLASS.

First Term—Differential Calculus, 3; Steam Engineering, 3; Geology, 3; Political Economy, 2; Railroad Engineering, 3; Surveying Practice, 3; Practical Geology, 1; Drawing, 1.

Second Term—Integral Calculus, 4; Steam Engineering, 3; Geology, 3; Railroad Engineering 1; Surveying Practice, 1; Drawing, 1; Political Economy, 2; Elementary Mechanics, 3; Practical Geology, 1.

Third Term—Statics and Dynamics, 5; Railroad Engineering, 2; Masonry Construction, 3; Political Economy, 2; Steam Engineering, 3; Surveying Practice, 3; Engineering Laboratory, 1; Drawing, 1.

### SENIOR CLASS.

First Term - Strength of Materials, 5; Metallurgy of Iron and Steel, 3; Astronomy, 3: Arches and Dams, 2 Stereotomy, 2; Drawing, 1 Surveying Practice, 1 Engineering Laboratory, 2.

Second Term—Hydraulics, 5; Sanitary Engineering, 3; Roofs and Bridges, 4; Waterworks, 2; Surveying Practice, 2; Drawing, 1.

Third Term—Waterworks, 3, Bridges, 4; Engineering Structures, Specifications, 3; Laws of Business, 3; Thesis.

### ELECTRICAL ENGINEERING COURSE FOR DEGREE OF B. E. E.

### JUNIOR CLASS.

First Term—Differential Calculus, 3; Analytical Chemistry, 4; Electricity and Magnetism, 3; Elements of Mechanism, 2; Chemical Laboratory, 2; Electrical Laboratory, 2; Drawing, 2; Political Economy, 2.

Second Term—Integral Calculus, 4; Elementary Mechanics, 3; Machine Design, 2; Electricity and Magnetism, 3; Chemical Laboratory, 2; Electrical Laboratory, 2; Drawing, 2; Political Economy, 2.

Third Term—Statics and Dynamics, 5; Machine Design, 2; Dynamo-Electric
A 1 U-6

Machinery, 2; Masoniy Construction, 3; Chemical Laboratory, 2; Electrical Laboratory, 2; Drawing, 2, Political Economy, 2.

#### SENIOR CLASS.

First Term—Dynamo-Electric Machinery, 4; Strength of Materials, 5; Metallurgy of Iron and Steel, 3; Engineering Laboratory, 2; Electrical Laboratory, 2; Drawing, 2; Electrical Design, 1.

Second Term—Dynamo-Electric Machinery, 4; Electrical Transmission of Power, 5; Hydraulics, 5; Electrical Laboratory, 2; Drawing, 2.

Third Term—Electric Railway Work, 3; Storage Batteries, 2; Specifications, etc., 3; Laws of Contracts, etc., 3; Thesis and Laboratory Work, 5; Drawing, 2.

## COURSE IN MANUAL TRAINING.

The Course in Manual Training, covering four years, is intended to replace the old apprenticeship system, and, at the same time, give the youth instruction in English, mathematics, science, drawing, the principles of mechanism and steam engineering. The recent growth of Manual Training Schools, not only here, but in Europe, is phenomenal. The apprenticeship system is now practically obsolete; hence the need of Manual Training Schools. The only opportunity offered to the youth of the State to obtain this instruction is given by the University, whose equipment and work of instruction has been so planned that we are able to offer:

- (a.) A course in general shop work, extending over three years, followed by a fourth year's work in one of the shops selected by the student. The design is to enable a young man to acquire considerable skill and a sound basis for the trade he may want to follow.
- (b.) A course in general shop work, extending over three years, followed by a fourth year's work in the management of boilers, engines, dynamos and electric light systems. This course is intended to train young men for the practical work of running steam plants or electric light stations.
- (c.) A course in general shop work extending over three years, together with class room work in the history, theory and practice of teaching, followed by a fourth year's work in handling classes in the shops and in laying out series of practical exercises. Shop instructors really qualified for their work are hard to find, and the course is an attempt to provide a means for training young men for such work in our own institution and in other schools where manual training is in practice.

#### FRESHMAN CLASS.

Courses (a) and (b): First Term—Algebra, 5; English, 3; Physics, 4; Machine Shop Practice, 1; Drawing, 2; Shop Work, 4; Physical Laboratory, 1.

Second Term—Solid Geometry, 5; English, 3; Physics, 4; Machine Shop Practice, 1; Drawing, 2; Shop Work, 4; Physical Laboratory, 1.

Third Term—Plane Trigonometry, 5; English, 3; Physics, 4; Machine Shop-Practice, 1; Physical Laboratory, 1; Drawing, 2; Shop Work, 4.

Course (c): First Term—Algebra, 5; English, 3; Physics, 4; Machine Shop Practice, 1; Pedagogy, 2; Physical Laboratory, 1; Drawing, 1; Shop Work, 3.

Second Term—Solid Geometry, 5; English, 3; Physics, 4; Machine Shop Practice, 1; Pedagogy, 2; Physical Laboratory, 1; Drawing, 1; Shop Work, 3.

Third Term-Plane Trigonometry, 5; English, 3; Physics, 4; Machine Shop Practice, 1: Pedagogy, 2; Physical Laboratory, 1; Drawing, 1; Shop Work, 3.

#### SOPHOMORE CLASS.

Courses (a) and (b): First Term-General Chemistry, 3; Steam Engines, 3; Etements of Mechanism, 2; Chemical Laboratory, 2; Drawing, 2.

(a.) Shop Work, 4; (b.) Boiler Firing, 4.

Second Term—General Chemistry, 3; Steam Engines and Pumps, 3; Elementary Mechanics, 3; Machine Design, 2; Chemical Laboratory, 2; Drawing, 2.

(a) Shop Work, 4; (b.) Boiler Firing, 4.

Third Term—General Chemistry, 5, Masonry Construction, 3; Boiler, 3; Machine Design, 2; Chemical Laboratory, 2; Engineering Laboratory, 1; Drawing, 2.

(a.) Shop Work, 2; (b.) Engine Running, 2.

Course (c): First Term—General History, 3; Constitutional History, 2; General Chemistry, 3; School Management, 3; Shop Teaching, 5; Chemical Laboratory, 2.

Second Term—General History, 3; Constitutional History, 2; General Chemistry, 3; Elementary Mechanics, 3; History of Education, 3; Chemical Laboratory, 2; Shop Teaching, 2.

Third Term—General Chemistry, 5; History of Education, 3; General History, 3; Constitutional History, 2; Shop Organization, 2; Shop Teaching, 2; Chemical Laboratory, 2.

NOTE 1.--Students completing one of the courses in Manual Training receive an appropriate certificate.

NOTE 2.- Candidates for admission to the Freshman Class in the College of Mechanic Arts and Engineering will be examined in all the subjects required for admission to the University except Latin. The drawing and shop work will be made up after admission.

NOTE 3.—Every student is required to have the equivalent of fifteen recitations per week, in which two hours of drawing, or shop work, or laboratory work are counted as equal to one recitation. But he will not be allowed to have the equivalent of more than twenty regitations without the consent of the Faculty.

## COLLEGE OF SCIENCE.

#### FACULTY.

E. H. MURFEE, President, Psychology.

A. E. MENKE and W. B. BENTLEY, Chemistry and Physics.

JEROME MCNEILL and S. E. MEEK, Biology and Geology.

O. C. GRAY and G. W. DROKE, Mathematics.

R H. WILLIS and E. H. CARNALL, English and Modern Languages.

J. F. HOWELL, History and Pedagogics.

R. W. Downy, Military Science and Tactics.

JESSIE L. CRAVENS, Elocution. .

REQUIREMENTS FOR ADMISSION.

(See Pages 37-41.)

#### GENERAL STATEMENT.

The design of the courses of study offered by this school is first to afford students a liberal education with some branch of science substituted for Latin or Greek, and second to make some one subject in science so prominent that the graduate will have an excellent foundation for a profession. By requiring every graduate to spend at least three years on one branch of science, as chemistry or botany, he is obliged to go much beyond the easy introduction, which is all that is required in the old-fashioned B. S. course, so that he has the advantage of the severe mental discipline which a difficult study affords, and when this course is completed has the satisfaction of knowing that he is the possessor of special knowledge which can be turned to immediate use if he sees fit.

#### COURSE IN CHEMISTRY.

The Course in Chemistry is designed to prepare students for actual work in connection with manufactures based on chemical principles. To the credit of chemistry as an industrial science, the tenth United States census shows, in the United States alone, the existence of 1349 chemical establishments, employing 29,500 workmen and paying annual wages to the amount of \$11,820,728.

The course extends over four years and embraces class room work, consisting of a full course of lectures on general,

theoretical, analytical, industrial and organic chemistry; nonchemical studies, such as English, modern languages, history, mineralogy, mathematics and physics being introduced with reference to their bearing on chemical work and for their educational value.

The student spends a large part of the four years in the laboratories. In the first year there is physical and biological laboratory practice, in the second year general chemical and physical, in the third and fourth years analytical and industrial.

The following are the details of instruction in this course:

#### FRESHMAN CLASS.

Biology, 3; Physics, 4; English, 3; Mathematics, 5. Laboratory work as required. Physics once, Biology twice weekly.

#### SOPHOMORE CLASS.

General Chemistry, 3 for two terms, 5 for third term; French or Spanish, 4; Heat, 2; General History, 3 for three terms; Chemical Philosophy, 4 for one term; Trigonometry, 3 for one term; Elective, 2 for two terms. Laboratory Work in Chemistry two afternoon per week; in Heat, 1; throughout the year.

## JUNIOR CLASS.

Organic Chemistry, 3; Theory of Qualitative Analysis, 5 for one term; Mineralogy 5, second term; Elective 5, third term; Geology, 4; German, 4. Laboratory Work in Qualitative Analysis throughout the year four times weekly.

#### SENIOR CLASS.

Metallurgy, 3; Technical Chemistry, 3; German, 4; Elective, 5. Laboratory work in Quantitative Analysis four afternoons per week throughout the year.

#### ELECTIVE STUDIES.

Any subject in the B. A. or B. S. Courses, if not mentioned already. Analytical Geometry, Calculus, Ethics, Surveying, Applied Electricity and Elements of Mechanism.

### COURSES IN BOTANY AND ZOOLOGY.

These courses are especially designed to meet the needs of those who expect to become teachers of Natural Science in high schools or colleges. They at the same time afford an excellent course for those who expect to study medicine or who wish to do original work in some department of science.

# COURSE IN BOTANY OR ZOOLOGY LEADING TO THE DEGREE OF BACHELOR OF SCIENCE.

#### FRESHMAN CLASS.

Biology, 2; English, 3; Mathematics, 5; Physics, 4; Laboratory Work in Biology, 2; Laboratory Work in Physics, 1.

#### SOPHOMORE CLASS.

Botany, 2; History, 3; Chemistry, 3; Laboratory Work in Botany, 2; Laboratory Work in Chemistry, 2; Pedogogics, 3.

#### JUNIOR CLASS.

Botany, 3; Zoology, 3; Laboratory Work in Botany, 2; Laboratory Work in Zoology, 2; German, 4; Elective, 1 to 6.

#### SENIOR CLASS.

Advanced Work in Botany or Zoology, 5; Geology, 3; German, 4; Geology, 2; Elective, 1 to 6; Laboratory Field Work in Geology and Botany or Zoology.

## COURSES IN HORTICULTURE AND ENTOMOLOGY.

These courses are intended to train young men or young women for Agricultural Experiment Station work. The establishment of these stations in all of the States has created a strong demand for professional entomologists and horticulturists, and the demand has been and will continue for some years to be greater than the supply.

# COURSE IN HORTICULTURE OR ENTOMOLOGY LEADING TO THE DEGREE OF BACHELOR OF SCIENCE.

#### FRESHMAN CLASS.

Biology, 3; English, 3; Mathematics, 5; Physics, 4; Laboratory Work in Biology, 2; Laboratory Work in Physics, 1.

## SOPHOMORE CLASS.

Botany, 2; History, 4; Chemistry, 3; Laboratory Work in Botany, 2; in Chemistry, 2; French or German, 4.

## JUNIOR CLASS.

Horticulture or Zoology, 3; Entomology, 3; Laboratory Work in Horticulture or Zoology, 2; in Entomology, 2; French or German, 4; Elective, 1 to 6.

### SENIOR CLASS.

Advanced Work in Entomology or Horticulture, 5; Geology, 3; Botany, 3; Laboratory Work in Geology, 2; Elective, 1 to 6.

#### COURSE IN GEOLOGY.

### FRESHMAN CLASS.

Biology, 3; Physics, 4; Mathematics, 5; English, 3; Drawing, 1; Biological Laboratory, 2; Physical Laboratory, 1.

#### SOPHOMORE CLASS.

General Geology, 3; Chemistry, 3; Botany, 2; Surveying, 3; Drawing, 1; Laboratory and Field Work in Geology, 2; Surveying Practice, 2; Chemical Laboratory, 2.

### JUNIOR CLASS.

Historical Geology, 3 (first term); Mineralogy, 5 (second term); Zoology, 2; Paleontology, 5 (third term); German or French, 3; Chemistry, 3; Geological Laboratory, 2; Chemical Laboratory, 2; Zoological Laboratory, 2.

#### SENIOR CLASS.

Special Work in Stratigraphy, Paleontology or Petrography, 5; Metallurgy, 3; German or French, 4; Psychology, 3; Elective, 1 to 6.

#### MEDICAL PREPARATORY COURSE NOT LEADING TO A DEGREE.

Students who intend to make medicine a profession are strongly advised to complete one of the scientific courses, selecting such subjects for their electives as will best fit them for their professional studies; but for the benefit of those whose time or means is limited, the following course is offered: If, on completion of the course, the student decides to graduate, he will be accepted as a full Junior in any of the courses leading to a B. S. Degree.

#### FRESHMAN CLASS.

Botany, 4; Mathematics, 5; French, 4; Zoology, 4 (first term); Comparative Anatomy, 4 (second term); Bacteriology, 4 (third term); Constitutional History, 2\*

#### SOPHOMORE CLASS.

Chemistry, 5; History, 4 (first two terms); Embryology, 4 (third term); Physics, 4; Psychology, 3.

## THE COLLEGE OF LIBERAL ARTS.

#### FACULTY.

E. H. MURFEE President, Psychology, Ethics and Political Economy.

O. C. GRAY and G. W. DROKE, Mathematics, Logic and Astronomy.

R. H. WILLIS and E. H. CARNALL, English and Modern Languages.

C. H. LEVERETT, Ancient Languages.

J. F. HOWELL, History and Pedagogics.

A. E. MENKE and W. B. BENTLEY, Chemistry and Physics.

JEROME MCNEILL and S. E. MEEK, Biology and Geology.

C. V. KERR, Mechanical Engineering.

R. W. Dowdy, Military Science and Tactics.

G. C. Schoff, Civil Engineering.

H. B. SMITH, Electrical Engineering.

JESSIE L. CRAVENS, Elocution. ✓

REQUIREMENTS FOR ADMISSION.

(See Pages 37-41.)

#### CLASSICAL COURSES FOR DEGREE OF BACHELOR OF ARTS (B. A.).

Each of these courses is designed to furnish a liberal education, to give superior mental discipline, and to prepare students to enter upon professional studies—law, medicine, journalism, etc. Each contains, besides English, not less than six yearly courses in languages, and at the same time the arrangements of elective studies allows students to give special attention to mathematics, to any branch of science, to history, or to one of the ancient or modern languages. Each class has such practical work as the subject requires, and optional studies in elocution or in other branches are allowed to the limit of twenty hours per week. The courses are merely outlined here. For details concerning the studies mentioned, consult Departments of Instruction, beginning on page 47.

#### I. COURSE WITH MATHEMATICS.

#### FRESHMAN CLASS.

Latin, 4; Mathematics, 5; Greek or French, 4; English, 3.

## SOPHOMORE CLASS.

Latin, 4; Mathematics, 5; General History, 3; Greek or French, 4.

#### IUNIOR CLASS.

Calculus (first and second terms), 4; Descriptive Astronomy (third term), 4; Latin, Greek or German, 4; English, 2; History, 2; Logic, 2; Elective, 2.

#### SENIOR CLASS.

Latin, Greek or German, 4; Political Economy, 2; Elective, 1).

#### II. COURSE WITH MODERN LANGUAGES.

#### FRESHMAN CLASS.

Latin, 4; French or Spanish, 4; Mathematics, 5, English, 3.

#### SOPHOMORE CLASS.

Latin, 4; French or Spanish, 4; History, 4; Physics, 4.

#### JUNIOR CLASS.

German, 4; English, 4; Logic, 2; Political Economy, 2.

#### SENIOR CLASS.

Psychology, 3; English, 4; German, 4; Elective, 5.

#### III. COURSE WITH ANCIENT LANGUAGES. V

#### FRESHMAN CLASS.

Latin, 4; Greek, 4; Mathematics, 5; English, 3.

## SOPHOMORE CLASS. - . |

Latin, 4; Greek, 4; History, 4; Physics, 4.

#### JUNIOR CLASS.

Latin, 4; Greek, 4; English, 4; Logic, 2; Political Economy, 2; Elective, 4.

#### SENIOR CLASS.

Psychology, 3; Latin or Greek, 4; Elective, 9.

#### IV. COURSE WITH HISTORY.

#### FRESHMAN CLASS.

Latin, 4; Constitutional History, 2; Mathematics, 5; English, 3; Elective, 2 to 6.

#### SOPHOMORE CLASS.

Latin, 4; General History, 3; Chemistry or Physics, 4; Elective, 5 to 9.

#### JUNIOR CLASS.

Ancient History, 2; Political Economy, 2; English, 2; Elective, 10 to 14.

#### SENIOR CLASS.

European History, 2; American History, 2; Psychology, 3; Elective, 9 to 13.

General Physics, General Chemistry, or General Biology is required for all Seniors who have not passed in one of these branches.

Elective Stud. 5—Any subjects mentioned in the B. A. courses above, if not counted already; 4 nalytic Geometry, 5; Ethics (third term), 3; General Biology, 5; Botany, 5; Zoology, 5; Geology, 5; Heat, 3; General Chemistry, 5; Analytical Chemistry, 5; Mineralogy, 5; Surveying, 5; Elements of Mechanism, 5; Electricity, 5. Except as provided above, or by special act of the Ficulty, elective studies, if counted for a degree, must be pursued at least one year e.ch; Greek or German, for two years.

#### GRADUATE COURSES FOR HIGHER DEGREES.

For Graduate Courses, see Departments of English and Modern Languages, and of Ancient Languages. For Higher Degrees, see page 92.

### THE NORMAL SCHOOL.

#### FACULTY.

E. H. MURFEE, President.

J. F. HOWELL, History and Pedagogics.

A. E. MENKE and W. B. BENTLEY, Physics and Chemistry.

O. C. GRAY and G. W. DROKE, Mathematics.

JEROME McNEILL and S. E. MEEK, Biology and Geology.

R. H. WILLIS and E. H. CARNALL, English.

C. H. LEVERETT, Latin.

R. W. DOWDY, Military Science and Tactics.

JESSIE L. CRAVENS, Elocution. V

#### REQUIREMENTS FOR ADMISSION.

(See Pages 37-41.)

The design of this school is to train teachers for the schools of the State. Technical instruction is begun in the Sub-Freshman, and finished in the Sophomore class, satisfactory completion of the course entitling the student to a certificate of "Licentiate of Instruction."

Section 6166 of the Revised Statutes of the State is as follows: "The State Superintendent of Public Instruction shall have power to grant State certificates, which shall be valid for life, unless revoked, to any person in the State who shall pass a thorough examination in all those branches required for granting county certificates; and, also in algebra and geometry, physics, rhetoric, mental philosophy, history, Latin, the Constitution of the United States, and of the State of Arkansas, natural history and the theory and art of teaching."

It will be observed that the course includes all the branches required for a State certificate in accordance with the law, and in addition, some other subjects with which a teacher should be familiar. After completing the Normal Course, students may take up in the Junior class the work of any course for which they may be prepared and compete for the corresponding degree.

Psychology is made the basis of technical instruction, an outline of this subject being given in the Freshman class, and special attention being given to the analysis of the intellectual processes. Students are encouraged and trained to study their own mental phenomena, and to note evidences of similar phenomena in the conduct of others, especially of children. The fundamental principles of teaching as deduced from psychical facts are presented, as also general methods of teaching based on these principles. Students are required to give much attention to principles as inculcated, and to methods as illustrated in approved pedagogical books and journals, a good selection of which is free of access in the University Library. At the same time they are taught to avoid a slavish dependence upon the methods of others, and encouraged to devise plans of their own.

The idea is continually made prominent that character building should be the grand aim of the teacher.

Further, the aims are:

First—To unify the work of our educational system by bringing the secondary schools and the University into close sympathy with each other.

Second—To teach pupils how to organize, grade and discipline the various kinds of schools.

Third—To give them a knowledge of general school law and of the school laws of Arkansas, especially the duties of teachers as officers of the State.

Fourth—To impart to them a valuable summary of the history of education.

Fifth—To aid them in creating for themselves high educational ideals, based on the principles of Christianity.

# NORMAL COURSE LEADING TO THE CERTIFICATE OF LICENTIATE OF INSTRUCTION (L. I.).

#### FRESHMAN CLASS.

Latin, 4; Mathematics, 5; English, 3; Biology, 2; Pedagogy, 2.

#### SOPHOMORE CLASS.

Latin, 4; Physics, 4; Constitutional History, 2; General History, 3; School Management, History of Education, and School Law, 3.

NOTE TO TEACHERS.—The attention of young teachers is called to the course of study on page 65, where it will be observed that instruction is offered in certain lines of pedagogics for periods of three months, thus giving them opportunity to spend their vacations here on such work as they may be competent to do. From March to June methods of teaching may be studied with the Sub-Freshman class, pedagogy, embracing elementary psychology, with the Freshman class, and school management with the Sophomore class. From June to September methods may be studied with the Sub-Freshman, pedagogy with the Freshman, and history of education with the Sophomore class. From September to December methods may be studied with the Sub-Freshman, pedagogy with the Freshman, and school law and history of education with the Sophomore class. In addition to this technical work, teachers will find superior advantages here in other branches of learning, should they desire to spend a vacation in fitting themselves for more thorough and higher work. Correspondence relative to the work of this department is cordially invited.

## GRADUATE COURSES AND DEGREES.

REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS (M. A).

Applicants for this degree must have previously taken the Degree of B. A., and in addition must take at the University, for a full scholastic year, sixteen hours of recitations and lectures per week, as determined by the Faculty, and submit a satisfactory thesis.

REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE (M. S.).

Applicants for this degree must have previously taken the Degree of B. S., and in addition must take at the University, for a full scholastic year, not less than sixteen hours of recita-

tions and lectures, as determined by the Faculty, and submit a satisfactory thesis.

REQUIREMENTS FOR THE DEGREE OF M. E., C. E. OR E. E.

The Degree of M. E., C. E. or E. E. will be given after three years to those graduates of the Mechanical, Civil or Electrical Engineering Courses who, by successful practice, prove themselves worthy and submit a satisfactory thesis.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY. (PH. D.).

- 1. This degree will be conferred for distinguished attainments, as shown by examination and thesis, in any one of the five following languages: Latin, Greek, German, French and English, together with subordinate attainments in two others of the five; or for distinguished attainments in one principal, and two subordinate, of the following sciences: Chemistry, Physics, Geology, Biology; or for distinguished attainments in Philosophy, or in Pure and Applied Mathematics.
- 2. This degree shall be open to persons who have received the Degree of B. A or B. S. at this or other reputable institutions.
- 3. No applicant shall be admitted to examination for this degree before two full scholastic years from the date of his admission to the course shall have passed. The last of these two years must be passed by the candidate in resident study at the University.
- 4 Applicants for this degree must state in their application what particular line of study they wish to pursue.
- 5. A thesis of 2000 or more words showing original research shall be required of every applicant, the subject of which shall be announced and passed upon by a committee of the Faculty at least one year before the time set for the final examination, and the thesis itself must be presented to the committee two months before admission to the examination. Twenty-five copies of the approved and printed thesis shall be placed in the University Library.

- 6. All applicants for this degree must, by the end of the first year of the course, be sufficiently conversant with French and German to read with ease any scientific work written in these languages.
- 7. The fee for examination of applicants for the Degree of Ph. D. is \$35; for the M. A. or M. S. Degree, \$25, and for each Diploma, \$5. The thesis is printed at the expense of the candidate.

For Graduate Courses, see English and Modern Languages and Ancient Languages.

## SCHOOL OF MILITARY SCIENCE AND TACTICS.

FRESHMAN CLASS.

Drill Regulations-I Part. Guard Duty.

SOPHOMORE CLASS.

Drill Regulations—II Part.
Grand Guards Out Posts and Picket Duty.

JUNIOR CLASS.

Field Fortifications and Intrenchments.

Military Law.

SENIOR CLASS.

Art and Science of War.
Military Law.

There will annually be delivered a course of lectures on Organization, Mobilization, Transportation and Supply, Castrametation, Sanitation and the National Guard.

## PREPARATORY DEPARTMENT.

The Preparatory Department is intended, first, to prepare students for any of the courses of study taught in the University; second, to furnish to those who cannot take a more extended course, as good a general education as the limited time will permit; third, to prepare teachers for the public grammar schools of the State. To secure these ends, four courses of study are offered, and with two of them normal studies are provided for intending teachers.

## REQUIREMENTS FOR ADMISSION.

- I. Arithmetic.—Students are examined in Wentworth's Grammar School Arithmetic as far as percentage and an accurate knowledge of all this is rigidly required. Teachers preparing pupils for admission should require them to learn principles and definitions accurately, and to analyze every example capable of analysis, or should give them thorough drill in mental arithmetic.
- 2. English Grammar.—Harvey's Elementary Grammar and Composition, Part I, with analysis.
- 3. Geography.—The whole of some complete manual of Geography, such as Maury's or Harper's.
- 3. Reading.—Students must be able to understand and to read intelligently specimens from McGuffey's Fifth Reader or from some work equally advanced.
- 5. Spelling.—Of any words contained in McGuffey's Fifth Reader.

#### SPECIMEN EXAMINATIONS FOR ADMISSION TO "A" CLASS.

Examinations will be of the same general character as the following:

#### I. ARITHMETIC TO PERCENTAGE, 2 HOURS.

1. A boy runs 3.876 miles, dropping a piece of paper every 4.75 feet. How many pieces does he drop?

Analysis: In one mile there are 5280 feet, and in 3.876 miles there are 3.876 times 5280 feet=20,465.28 feet. If in 4.75 feet he drops 1 piece, in 20,465.28 feet he will drop as many pieces as 4.75 is contained in 20,465.28 feet, which is 4308 papers.

- 2. Reduce  $\frac{365}{511}$  to its lowest terms.
- 3. A owns  $\frac{3}{5}$  of a ship worth \$25,748, B  $\frac{1}{4}$  of the remainder, C  $\frac{1}{8}$  of the amount belonging to A and B, and D owns what is still left. What is the value of D's share? Give full analysis.
- 4. Find cost of papering a room 32 feet long, 22 feet wide, 13 feet high, with paper 18 inches wide, 8 yards in a roll, at \$1.25 a roll, if 50 square yards be allowed for doors, windows and base boards?
- 5. The longitude of New York is 74° west, that of Paris is 2° 20' east. When it is fifteen minutes past 10 a. m. in New York, what is the time in Paris?

#### II. GRAMMAR, 2 HOURS.

- 1. Name and define all the parts of speech.
- Name and define all the different kinds of pronouns, all the different kinds of particles, and give an example of each kind.
- 3. Give three rules for forming the possessive case of nouns, with example of each. What is the possessive case of conscience?
- 4. Analyze the following sentences: (2.) The boy that you saw is my younger brother. (2.) One soldier was present, when the roll was called.

#### III. GEOGRAPHY.

- 1. Name in their order twenty rivers flowing into the Atlantic Ocean or its arms between the Bay of Fundy and the Florida Keys.
- 2. Name the principal cities of Louisiana, Texas, Ohio, Illinois, Michigan and Minnesota (one city each), and describe their situation.
  - 3. Describe the climate and productions of Mexico.
- 4 and 5. What and where are the following? Give exact locations: Aconcagua, Aral, Baikal, Bothnia, Ceylon, Delhi, Farewell, Formosa, Hecla, Munich, Ponchartrain, Sunda, Verde, Volga, Yukon.

NOTE.—Candidates for Sub-Freshman class, Classical Course, will be examined in Arithmetic, Algebra to fractions, Harvey's Elementary Grammar, Part II; History of the United States and of Arkansas, Descriptive Geography and Latin (first seventy-five lessons in Jones).

Agricultural, scientific and engineering students are exempt from the Latin examination, having one on Physical Geography and Book-keeping instead. Students entering after the session has begun will be examined, also, on the work passed over by their class.

## AGRICULTURAL COURSE.

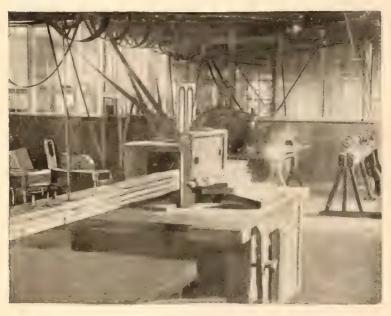
This course prepares students for the Agricultural Department.

#### A CLASS.

Mathematics, 5; English, 4; History, 3; Physical Geography, 2; Book-keeping, 1; Agriculture, 2; Farm and Shop Work, four periods of two hours each.

#### SUB-FRESHMAN CLASS.

Mathematics, 5; English, 4; History, 2; Chemistry, 2; Physiology, 2; Agriculture, 2; Farm and Shop Work, four periods of two hours each.



WOOD SHOP.

## ENGINEERING AND MANUAL TRAINING COURSES.

#### A CLASS

First Term.—Arithmetic, 5; English Grammar, 4; United States History, 3; Physical Geography, 2; Book-keeping, 1; Tools and Materials, 1; Free Hand Drawing, 1; Shop Work, 3.

Second Term.—Arithmetic, 5; English Grammar, 4; United States History, 3, Physical Geography, 2; Book-keeping, 1; Carpentry, 1; Drawing, 1; Shop Work, 3.

Third Term.—Algebra, 5; History of Arkansas, 3; Physical Geography, 2

Book-keeping, I; English Grammar, 4; Pattern Making and Moulding, I; Drawing, I; Shop Work, 3.

#### SUB-FRESHMAN CLASS.

First Term—Algebra, 5; English, 4; Civil Government, 1; Physiology, 2; Founding and Forging, 1; Drawing, 1; Shop Work, 4; General History, 2.

Second Term. - Algebra, 5; English, 4; General History, 2; Physiology, 2; Founding and Forging; 1; Drawing, 1; Shop Work, 4; Civil Government, 1.

Third Term.—Geometry, 5; English, 4; General History, 3; Physiology, 2; Founding and Forging, 1; Drawing, 1; Shop Work, 4; Civil Government, 1.

NOTE I.—Students in the Manual Training Normal Course have the same studies as Engineering students in "A" Class. During Sub-Freshman year they take Methods of Teaching instead of Civil Government and General History, which they will have in Sophomore year.

NOTE 2.—Candidates for admission to the Freshman Class in the College of Mechanic Arts and Engineering will be examined in all the subjects required for admission to the University, except Latin.

NOTE 3.— Every student is required to have the equivalent of fifteen recitations per week in which two hours of drawing or shop work or laboratory work are counted as equal to one recitation. But he will not be allowed to have the equivalent of more than twenty recitations without the consent of the Faculty.

#### SCIENTIFIC COURSE.

This course prepares students for any course in the College of Science.

#### "A" CLASS.

Mathematics, 5; English, 4; History, 3; Physical Geography, 2; Book-keeping, 1. Farm or Shop Work, four periods of two hours each.

#### SUB-FRESHMAN CLASS.

Mathematics, 5; English, 4; History, 2; Civil Government, 1; Chemistry, 2; Physiology, 2. Farm or Shop Work, four periods of two hours each.

## CLASSICAL COURSE.

This course prepares students for the College of Liberal Arts or for the Normal School.

#### "A" CLASS.

Mathematics, 5; English, 4; History, 3; Latin, 4. Farm or Shop Work, four periods of two hours each.

#### SUB FRESHMAN CLASS.

Mathematics, 5; English, 4; History, 2; Physiology, 2; Latin, 4. Farm or Shop Work, four periods of two hours each.

NOTE.—Students taking the Normal Course will study Methods of Teaching instead of History.

## DETAILED WORK OF THE COURSES.

#### "A" CLASS.

Mathematics.—Wentworth's Arithmetic, percentage to end, first and second terms; Wentworth's Algebra to Fractions, third term.

English.—Harvey's Elementary Grammar and Composition, Part II, to end; Selections from Irving, Hawthorne, and other authors for supplementary work; three original compositions per term corrected and copied.

History.—Eggleston's United States History, first and second terms; Hempstead's History of Arkansas, third term.

Physical History.—The Eclectic Physical Geography.

Book-keeping. Bryant and Stratton's Common School Book-keeping.

I atin.—Jones' First Lessons in Latin, seventy-five lessons with Gildersleeve's Grammar; Roman History and Fables, ten pages.

Wood-working.—Principles of carrentry and joinery, wood turning, pattern making, cabinet work. Eight hours per week.

#### SUB-FRESHMAN CLASS.

Mathematics. - Wentworth's Algebra to page 218, first and second terms; Wentworth's Geometry, three books, third term.

English.—Meiklejohn's Grammar with five compositions per term corrected and copied; Shakespeare's Julius Cæsar and Henry VIII., and Irving's Alhambra.

History .- Appleton's History of the World.

Physiology.-Martin's Human Body, Briefer Course, with experiments.

Chemistry.-Williams's Introduction to Chemical Science.

Latin. Four books of Cassar (Kelsey or G eenough); Jones' Lessons, finished; Gilversleeve's Grammar.

Civil Government. Peterman's Civil Government, and Johnson's History of American Politics.

Methods of Teaching .- Swett's Methods, with lectures.

Founding and Forging. - Moulding; melting and pouring brass and iron; management of cupola; management of tire; drawing; welding; riveting; tempering. Eight hours per week.

NAME

# CATALOGUE OF STUDENTS.

ABBREVIATIONS.—Ph. D., Doctor of Philosophy; B. A., Bachelor of Arts; C. E., Civil Engineering; M. E., Mechanical Engineering; B. S., Bachelor of Science; Agr., Agricultural; Irr., Irregular.

## SESSION 1892.

## COLLEGIATE DEPARTMENT.

# POST GRADUATES.

T. A. S. P. 14 F 21 F 21 F	TEGILD BITCH	COURSE
George W. Droke, A. M	Fayetteville, Ark	Ph. D.
J. Collin Massie, A. B.	Fayetteville, Ark	Ph. D
Ida Pace, B. A	Harrison, Ark	Ph. D.
Anna M. Waggener, B. I	LFayetteville, Ark	Ph. D.
Naoma J. Williams, A. I	M Fayetteville, Ark	P. D
Total		
	SENIOR CLASS.	
NAME.	Residence.	Course
Arbuckle, J. D	Charleston, Franklin county	B. A.
Black, J. W	Franklin, Izard county	В. А.
Blackwell, W. I	Perryville, Perry county	C. E.
Curry, Lula	Fayetteville, Washington county	B. S.
Hamilton, W. J	Hartford, Sebastian county	B. A.
Hedrick, I. G	Robinson, Benton county	C. E.
Holcomb, Cener	Fayetteville, Washington county	В. А.
Kimball, G. H	Dardanelle, Yell county	
Pharr, J. S	LaGrange, Lee county	B. A.
Vaulx, Julia	Fayetteville, Washington county	В. А.
Vaulx, Samuel	Fayetteville, Washington county	B. A.
Wood, A. C	Fayetteville, Washington county.	M. E.
Total		12
	JUNIOR CLASS.	
NAME.	RESIDENCE.	Course
Armistead, C. F	Charleston, Franklin county	B. A.

Ash, L. R......Fayetteville, Washington county..........C. E.
Bibb, Blanche......Franklin, Kentucky................B. A.

NAME.	RESIDENCE.	Course.
Braly, E. H	Fayetteville, Washington county	В. А.
	Webber's Falls, Indian Territory	
	Boonsboro, Washington county	
	Fayetteville, Washington county	
	Springdale, Washington county	
Hall, Ed. C	Dardanelle, Yell county	C. E.
Harris, Rena	Fayetteville, Washington county	B. S.
Irvin, R. B	Little Rock, Pulaski county	M. E.
	Fayetteville, Washington county	
	La Grange, Lee county	
	Pierce City, Mo	
Vandeventer, James	Fayetteville, Washington county	B. S.
	Fayetteville, Washington county	
Total		20
	SOPHOMORE CLASS.	
NAME.	RESIDENCE.	Course.
	Van Buren, Crawford county	
	Pontotoc, Miss	
_	Fayetteville, Washington county	
	Fayetteville. Washington county	
	Marianna, Lee county	
	Prairie Grove, Washington county	
	Bentonville, Benton county	
	Crowley, Greene county	
	Waldo, Columbia county	
	Richmond, Little River county	
	Robinson, Benton county	
	Fayetteville, Washington county	
	Bentonville, Benton county	
	Pittsburg, Pa	
	Dallas, Polk county	
	Fayetteville, Washington county	
	Warren, Bradley county	
	Batesville. Independence county	
	Illawara, East Carroll Parish, La	
	Prairie Grove, Washington county	
_	Prairie Grove, Washington county	
	Fayetteville, Washington county	
Myar, A	Little Rock, Pulaski county	C. E.

NAME.	RESIDENCE.	·Course.
Nash, J. D	Waldo, Columbia county	B. A.
Pittman, R	Fayetteville, Washington county	
Purdy, S. M	Lake Providence, La	C. E.
	Russellville, Pope county	
Smith, A. V	Lanark. Bradley county	M. E.
South, J. G	Mountain Home, Baxter county	B. A.
Taff, S. M	Fayetteville, Washington county .	C. E.
Treadwell, S. C	Pine Bluff, Jefferson county	Normal.
	Lockesburg, Sevier county	
Vaulx, Madge	Fayetteville, Washington county.	B. A.
Total		33-
	FRESHMAN CLASS.	
2.7		
NAME.	Residence	Course.
	Farmington, Washington county	
	Fayetteville, Washington county	
	Malvern, Hot Spring county	
	Fayetteville, Washington county.	
	Springdale, Washington county	
	Springdale, Washington county	
	Og len, Little River county	
	Fayetteville, Washington county	
	Charleston, Franklin county	
	Fort Smith, Sebastian county	
	Dardanelle, Yell county	
	Cooper, Texas	
	Fayetteville, Washington county.	
	Fayetteville, Washington county.	
	Morrilton, Conway county	
	Paris, Logan county	
*	Alma, Crawford county	**
	Greenwood, Sebastian county	
	Marianna, Lee county	
	Booneville, Logan county	
	Bentonville. Benton county	
	Robinson, Benton county	
	Fayetteville, Washington county	
	Fayetteville, Washington county.	
	Fayetteville, Washington county,	
	Fayetteville, Washington county	
	Forrest City, St. Francis county	
•	Campbell, Texas	
Deener, Sidney	Searcy, White county	Irr.

Name.	Residence.	Course.
Drees, C. J	Little Rock, Pulaski county	B. S.
	. Fayetteville, Washington county	
	. Fayetteville, Washington county	
	. Pine Bluff, Jefferson county	
	. Fayetteville, Washington county	
Gunter, Gertie	. Fayetteville, Washington county	B. S.
	.Van Buren, Crawford county	
Hardin, Nina	. Van Buren, Crawford county	В. А.
Harris, Alice	. Fayetteville, Washington county	B. S.
Harris, Julia	. Whitney, Texas	Normal.
	. Magnolia, Columbia county	
Hill, S. B	Franklin, Izard county	В. А.
Hill, T. R	Franklin, Izard county	, B. A.
Hill, W. E	. Melbourne, Izard county	B. A.
Hollis, Carl	Orlando, Cleveland county	B. S.
Hudspeth, J. L	. Hamburg, Ashley county	B. A.
Hughes, Mary	. Osage Mills, Benton county	B. S.
James, Aggie	. Alma, Crawford county	Irr.
Jones, Annie	. Dardanelle, Yell county	. Normal.
	. Center Ridge, Conway county	
	. Hot Springs, Garland county	
	. Appleton, Pope county	
	. Fayetteville, Washington county	
	.Fayetteville, Washington county	
	. Lonoke, Lonoke county	
	Little Rock, Pulaski county	
	. Cincinnati, Washington county	
	Richmond, Little River county	
	. Greenway, Clay county	_
	. Illawara, La	
	. Cincinnati, Washington county	
	Fayetteville, Washington county	
	Central City, Sebastian county	
	Plano, Texas	
	Fayetteville, Washington county	
	Fyetteville, Washington county	
	Fayetteville, Washington county	
	. Harmony, Johnson county	
	Evening Shade, Sharp county	
· ·	Lake Providence, La	
* - *	Mulberry, Franklin county	
	. Robinson, Benton county	
	.Lockesburg. Sevier county	

NAME.	RESIDENCE.	Course.
Simonds, Allie	Fayetteville, Washington county	B. S.
Simpson, T. W	Melbourne, Izard county	B. A.
Smith, Gertie	Fayetteville, Washington county	B. S.
Spencer, W. M	Charleston, Franklin county	M. E.
Stubblefield. Dema	Exeter, Mo	B. A.
	Exeter, Mo	
	Smeadly, Johnson county	
	Clarendon, Monroe county	
	Genoa, Ouachita county	
	Pine Bluff, Jefferson county	
	Fayetteville, Washington county	
	Fayetteville, Washington county	
	Fayetteville, Washington county	
-	Fayetteville, Washington county	
	Fayetteville, Washington county	
	Little Rock, Pulaski county	
	Summerville, Calhoun county	
	Fayetteville, Washington county	
	Elm Springs, Washington county	
	Van Buren, Crawford county	
	Fayetteville, Washington county	
Total	Bay Village, Poinsett county	
TOTAL		90
St	UB-FRESHMAN CLASS.	
NAME.	RESIDENCE.	Course.
	Fayetteville, Washington county	
Anderson, T. S	Magazine, Logan county	Normal.
	Fayetteville, Washington county	
	Boonsboro, Washington county,	
	Prairie Grove, Washington county	
	Fayetteville, Washington county	_
	Eureka Springs, Carroll county	
	Appleton, Pope county	
	. Fayetteville, Washi gton county	
	Boonesboro, Washington county	
	Washington, Hempstead county	
	. Fayetteville, Washington county	
	Fayetteville, Washi gton county	
	Waldo, Columbia county	
	. Boonesboro, Washington county	
Com loss Dans	Boonesboro, Washington county	
	Boonesboro, Washington county	B. S.

Name.	Residence.	Course.
Cox, R. S	.Gasville, Baxter county	B. A.
	.Fayetteville, Washington county	
	Fayetteville, Washington county	
	. Fayetteville, Washington county	
	Fayetteville, Washington county	0
	Boonesboro, Washington county	
	. Fayetteville, Washington county	
	Lonoke, Lonoke county	
	. Waldo, Columbia county	
Gore, J. H	.Green Valley, Washington county	. Normal.
Griffith, Alma	. Fayetteville, Washington county	B. S.
	. Farmington, Washington county	
Guilliams, R	. Farmington, Washington county	Agr.
Hagood, Clara	. Boonesboro, Washington county	B. S.
Hale, G. L	. Lufra, Ouachita county	Agr.
Henderson, A	.Osage Mills, Benton county	B. S.
Holcomb, J. Belle	. Fayetteville, Washington county	B. A.
Holleman, Inez	. Fayetteville, Washington county	B. A.
Hunt, Nellie	.Fayetteville, Washington county	B. S.
Jacobs, L. P	. Harmony, Johnson county	Normal.
	. Calhoun, Columbia county	
Johnson, R. L	. Jonesboro, Craighead county	B. A.
Kantz, Mary E	.Fayetteville, Washington county	B. A.
	. Fayetteville, Washington county	
	. Fayetteville, Washington county	
King, O. O	. Harmony, Johnson county	B. A.
Lawler, T. D	. Little Rock, Pulaski county	B. S.
Leverett, Rose	. Fayetteville, Washington county	B. A.
Lewis, Lena	. Fayetteville, Washington county	B. A.
	.Fayetteville, Washington county	
Logan, D. P	. Lewisville, Lasayette county	B. A.
	. Fayetteville, Washington county	
McAdams, L	. Gainesville, Texas	B. S.
	. Huntsville, Boone county	
_	. Forrest City, St. Francis county	
,,	. Fayetteville, Washington county	
	. Exeter, Missouri	
	. Fayetteville, Washington county	
	. Fayetteville, Washington county	
	. Alma, Crawford county	
	. Clarendon, Monroe county	
	. Jonesboro, Craighead county	
	. Prairie Grove, Washington county	
Mooney, Della	. Fayetteville, Washington county	В. А.

NAME.	RESIDENCE.	Course.
Moore, Ada	. Cincinnati, Washington county	B. S.
Moore, Ira	. Cincinnati, Washington county	M. E.
	.Cincinnati, Washington county	
	. Cincinnati, Washington county	
	Fayetteville, Washington county	
	Fayetteville, Washington county	
	Fayetteville, Washington county	
	Enola, Faulkner county	
	Dallas, Pope county	
*	Fayetteville, Washington county	_
	. Harrison, Boone county	
	Jasper, Newton county	_
	Butlerville, Lonoke county	
	. Magazine, Logan county	
	.Fayetteville, Washington county	
	. Fayetteville, Washington county	
	. Boonesboro, Washington county	
	Morrilton, Conway county	
	. Moffett, Washington county	
	Ozark, Franklin county	
	. Weldon, Jackson county	
Shaha, R	. Richland, Missouri	B. A.
Shaw, R. E	.Tula Station, Alabama	. Normal.
Shuler, T. F	. Lewisville, Lafayette county	. Normal.
Shultz, W. M	. White Oak, Cleveland county	B. S.
Simpson, J. M	El Dorado, Union county	B. A.
Skelton, C. D	. Fayetteville, Washington county	C. E.
Smith, L	. Fayetteville, Washington county	B. S.
Spears, T. R	. Clarksville, Johnson county	Agr.
Spencer, A. R	. Charleston, Franklin county	M. E.
Spencer, Mamie	. Charleston, Franklin county	B. A.
	.Green vood, Sebastian county	
Stubblefield, F	.Exeter, Missouri	Agr.
Stubblefield, G	. Exeter, Missouri	B. A.
	Fayetteville, Washington county	
Taylor, Rosie	. Fayetteville, Washington county	B. S.
	.LaGrange, Lee county	
	.Fayetteville, Washington county	
	. Marvel. Philhps county	
	Fayetteville, Washington county	
	Fayetteville, Washington county	
	Judsonia, White county	
	Mulberry, Franklin county	
	. Maxville, Sharp county	
*******************	and the county and a second	441111010

NAME.	RESIDENCE.	Course.
Wells, J. M	. Alma, Crawford county	B. S.
Williams, Hattie	.Fayetteville, Washington county	В. А.
	. Fayetteville, Washington county	
Willis, J. R	. Dayton, Sebastian county	C. E.
	.Bull's Gap, Tennessee	
Wright, A	. Fayetteville, Washington county	C. E.
	.Charleston, Franklin county	
	"A" CLASS.	
Name.	RESIDENCE.	Course.
Adams, C. D	. Fayetteville, Washington county	M. E.
	.Alma, Crawford county	
Adams, I. F	. Fort Smith, Sebastian county	B. A.
Allen, W. A	. Farmington, Washington county	Agr.
Anderson, E	. Augusta, Woodruft county	B. S.
Armstrong, A. C	. Van Buren, Crawford county	B. A.
Armstrong, J. W	. Fayetteville, Washington county	B. S.
Ash, E. N	.Fayetteville, Washington couuty	C. E.
Baker, Minnie	. Fayetteville, Washington county	B. S.
Baker, Nellie	. Chatauque, Kansas	B. A.
Baldwin, Ada	. Mansfiel 1, Sebastian county	B. A.
	. Fayetteville, Washington county	
Benn, J K	Dayton, Sebastian county	Agr.
Beattie, G	. Fayetteville, Washington county	M. E.
	Franklin, Kentucky	
	. Walnut Hills, Lafayette county	
Bradley, W. F	.Eureka Springs, Carroll county	M. E.
Brock, Ollie	. Fayetteville, Washington county	B. S.
Brookfield, Vida	. Wynne, Cross county	Irr.
	Dayton, Sebastian county	
· ·	Fayetteville, Washington county	
	Haynes Station, Lee county	
	Medford, Desha county	
	.Fayetteville, Washington county	
	Fayetteville, Washington county	
	Fort Smith, Sebastian county	
	. Fayetteville, Washington county	
	.Damascus. Faulkner county	
	. Bentonville, Benton county	_
· ·	Fayetteville, Washington county	
00.	D. Ilas, Texas	
	Palestine, St. Francis county	
Cole, Agnes	Fayetteville, Washington county	B. S.

NAME.	RESIDENCE.	Course.
Cole, I. A	Fayetteville, Washington county	B. S.
	Fayetteville, Washington county	
	Boonesboro, Washington county	
	Little Rock, Pulaski county	
	Fayetteville, Washington county	
	Fayetteville, Washington county	
	Fayetteville, Washington county	
	Fayetteville, Washington county	
	Booneville. Logan county	
	Robinson, Benton county	
	Robinson, Benton county	· ·
	Fayetteville, Washington county	
	Fayetteville, Washington eounty	
	Lavaca, Sebastian county	
	Haynes, Lee county	
	Ozark, Franklin county	
	Arkansas City, Desha county	
	Albuquerque, New Mexico	
	Fayetteville, Washington county	
Duncan, Eleanor	Fayetteville, Washington county	B. A.
	Forrest City, St. Francis county	
	Fayetteville, Washington county	
	Fayetteville, Washington county	
Embry, E. F	Atkins, Pope county	M. E.
	Boonsboro, Washington county	
Evatt, O. K	Harrison, Boone county	B. S.
	Hackett City, Sebastian county	
Farrar, Annie	Marianna, Lee county	B. S.
Fleming, Archie	Fayetteville, Washington county	
Fletcher, J. D	Fayetteville, Washington county	Normal.
Frost, B	Bedeson, Mo	M. E.
Gallaway, Charlotte	Fayetteville, Washington county	B. S.
Gaskill, Lettie	Fayetteville, Washington county	B. A.
Gray, B. C	Fayetteville, Washington county	B. S.
Gregg, F	Fayetteville, Washington county	
	Fayettevile, Washington county	
Grother, Henry	Fayetteville, Washington county	B. S.
Guilliams, W. E	Fayetteville, Washington county	
Hale, L. B	Lufra, Ouachita county	
	Hood, Washington county	
	Van Buren, Crawford county	
	Princeton, Dailas county	
Harris, Minnie	Fayetteville, Washington county	B. S.
Harrison, E	Fayetteville, Washington county	M. E.

NAME.	Residence,	Course.
Hart, R	.Thompson, Washington county	M. E.
Hayes, L	. Webbers Falls, I. T	C. E.
Henderson, May	. Osage Mills, Benton county	B. S.
Howell, Carrie	Fayetteville, Washington county	B. S.
Howell, H. A	. Russellville, Pope county	M. E.
	Fort Smith, Sebastian county	
Hunt, S	. Fayetteville, Washington county	B. S.
Hynes, W	Van Buren, Crawford county	Normal.
Ingraham, L. H	Lavaca, Sebastian county	B. A.
James, H. T	.Alma, Franklin county	Irr.
Jenkins, J. T	Fayetteville, Washington county	Agr.
Jones, T	Fayetteville, Washington county	B. S.
Jones, R. L	. Fayetteville, Washington county	Agr.
Kantz, Margaret	Fayetteville, Washington county	B. A.
	Cherokee	
	.Conway, Faulkner county	
	. Harrison, Boone county	
Knowles, B. F	. Watalula, Franklin county	Agr.
	. Fayetteville, Washington county	
	Dallas, Polk county	
	. Marianna, Lee county	
	Deaslie, Lafayette county	
	. Boonesboro, Washington county	
	Fordyce, Dallas county	
	. Fayetteville, Washington county	
	. Fayetteville, Washington county	
	Fayetteville, Washington county	
	. Alma, Crawford county	
	Fayetteville, Washington county	
	. Fayetteville, Washington county	
	Fayetteville, Washington county	
	Fayetteville, Washington county	
	Fayetteville, Washington county	
	Robinson, Benton county	
	Faye teville, Washington county	
	Pine Bluff, Jefferson county	
	. Fayetteville, Washington county	
	Paris, Logan county	
	Robinson, Benton county	
	Cincinnati, Washington county	
Morrow, Luia	rayetteville, washington county	, B. A.

NAME.	Residence.	Course
Murfee, Manning	Fayetteville, Washington county	Agr.
Murfee, W. H	Fayetteville, Washington county	B. S.
Myers, Belva	Van Buren, Crawford county	B. S.
Myers, Cora	Van Buren, Crawford county	B. S.
Newell, R. W	Little Rock, Pulaski county	C. E.
	Fayetteville, Washington county	
	Paragould, Greene county	
Parker, H		M. E.
	Fayetteville, Washington county	
	Fayetteville, Washington county	
· ·	Fayetteville, Washington county	
	Kansas City, Mo	
	Sugar Loaf, Sebastian county	
	Snapp, Woodruff county	
	Stuttgart, Arkansas county	
	Siloam, Benton county	
	Fayetteville, Washington county	
	Fayetteville, Washington county	
	Sub Rosa, Franklin county	
Rose, M. B	Little Rock, Pulaski county	M. E.
	Fayetteville, Washington county	
	Ozark, Franklin county	
Scott, Mamie	Fayetteville, Washington county	Irr.
	Fayetteville, Washington county	
Seamans, J. M	Arkansas City, Desha county	Agr.
Self, B. F	Temple, Texas	M. E.
Seymore, J	Kingsley, Cleveland county	B. S.
Shannon, Dora	Fayetteville, Washington county	B. S.
Shapard, Vaulx		B. A.
Sherwood, A. H	Fayetteville, Washington county	B. S.
Skipmore, M. A	Boonsboro, Washington county	Agr.
Skillen, J. A	Fayetteville, Washington county	B. A.
Smith, Myrtle	Fayetteville, Washington county	B. S.
	Snapp, Woodruff county	
	Cassville, Mo	
	Clarendon, Monroe county	
	Fayetteville, Washington county	_
Thurman, Sarah		Normal

NAME.	Residence.	Course.
Tidwell, J	. Beebe, White county	Normal.
Turner, Ellis B	. Marvel, Phillips county	B. A.
Wade, J. S	. Fayetteville, Washington county	M. E.
Wade, M	. Fayetteville, Washington county	M. E.
	. Memphis, Tenn	
	. Fayetteville, Washington county	
	. Fayetteville, Washington county	
	. Mulberry, Franklin county	
	.Seligman, Mo	
	. Fayetteville, Washington county	
	.Frankfort, Ind	
	.Little Rock Pulaski county	
	. Magnolia, Columbia county	
		,
	"B" CLASS.	
NAME.	Residence.	COUNTY
	. Robinson	
	.Osage Mills	
Ball, Minnie	. Mansfield	Sebastian
	. Hope	
Barry, Kate	.Fayetteville	Washington
	. H ynes Station	
Carter, Ophelia	.Fayetteville	Washington
Cawood, J. B	.Osage Mills	Washington
	. Boonsboro	
Croom, W. B	. Dardanelle	Yell
Curry, W. E	.Fayetteville	Washington
	Lavaca	
Dowell, Pearl	. Fayetteville	Washington
Easterly, Maude	.Fayettvide	Washington
Ferguson, J. D	.Genoa	Miller
Good, Joy	. Fayetteville	Washington
Gordon, C. S	Camden	Ouachita
Hagood, A. S	. Boonesboro	Washington
Hagood, Minnie	Boonesboro	Washington
Hill, Emily	.Fayetteville	Washington
	.Fayetteville	
	.Charleston	
	.Fayetteville	
	.Texarkana	
	.Alma	
	.Dardanelle	
	Fayetteville	
	•	C)

NAME.	Residence.	County.
Jones, D	Fayetteville	
Kantz, Maude	Fayetteville	
Kell, Bessie	Fayetteville	Washington
Kelly, T. M	Brinkley	Monroe
Kirten, C	Little Rock	Pulaski
Knesal, E. L	Fayetteville	
	Fayetteville	
	Little Rock	
Levy, J	Camden	Ouachita
Lewis, L	Fayetteville	
	Pine Bluff	
	Weddington	
	Little Rock	
	Fayetteville	
	Fayetteville	
Mitchell, A	Leon	Franklin
	Helena	
	Van Buren	
	Cincinnati	
Moore, L. R	Oak Lodge	Indian Territory
	Oak Lodge	
Munroe, L. II	Fayetteville	Washington
Oliver, G	Lee's Creek	Crawford
Oxley, C	Paragould	Greene
Palmer, W. J	Marvell	Bcone
Phillips, F	Fayetteville	Washington
Pile, T	Van Buren	Crawford
Powell, Jesse	Sugar Log	Crawford
Purdy, Lizzie	Fayetteville	
Purdy, W	Fayetteville	
Robinson, Jennie	Fayetteville	
	Fayetteville	
Reid, E. A	Conway	Faulkner
	Fayetteville	
Summers, J	Forrest City	St. Francis
	Fayetteville	
	Little Rock	
	Monette	
	Stanton	
	Fayetteville	
·	**********	4,7
		•

## NOT CLASSIFIED.

NAME.	Town.	County.
Baker, K. C	Oceola, Mo	
Baker, Florence	Fayetteville	Washington
Cox, Gilbert	Fayetteville	
Curry, C	Fayetteville	
Dye, Lucile	Forrest City	St. Francis
	Watalula	
	Carthage, Mo	
	Carthage, Mo	
	Fayetteville	
	Fayetteville	
	Ozark	
	Fayetteville	
Wade, L. H	Fayetteville	Washington
Wood, Cora	Fayetteville	
Total		
		•
	SPECIAL.	
Name.		County.
	SPECIAL.	
Blackwell, B	SPECIAL. TownPerryville	Perry
Blackwell, B Britton, Ella	SPECIAL. Town.	Репу
Blackwell, B Britton, Ella Carter, Lizzie	SPECIAL. TOWN. PerryvilleKansas City, Kan	PerryWashington
Blackwell, B Britton, Ella Carter, Lizzie Gray, Ethel	SPECIAL. TOWN. Perryville Kansas City, Kan Fayetteville	PerryWashingtonWashington
Blackwell, B Britton, Ella Catter, Lizzie Gray, Ethel Heberly, J. A	SPECIAL. TOWN. Perryville Kansas City, Kan Fayetteville Fayetteville	
Blackwell, B Britton, Ella Carter, Lizzie Gray, Ethel Heberly, J. A Lee, Eva	SPECIAL. Town. Perryville Kansas City, Kan Fayetteville Tucson, Ariz	
Blackwell, B Britton, Ella Catter, Lizzie Gray, Ethel Heberly, J. A Lee, Eva Murfee, H. P	SPECIAL. TOWN. Perryville Kansas City, Kan Fayetteville Tucson, Ariz Fayetteville Marion, Ala	
Blackwell, B	SPECIAL. TOWN. Perryville Kansas City, Kan Fayetteville Tucson, Ariz Fayetteville	
Blackwell, B	SPECIAL. TOWN. Perryville Kansas City, Kan Fayetteville Tucson, Ariz Fayetteville Marion, Ala Springfield, Mo	
Blackwell, B	SPECIAL. Town. Perryville Kansas City, Kan Fayetteville Tucson, Ariz Fayetteville Springfield, Mo	
Blackwell, B	SPECIAL. TOWN. Perryville Kansas City, Kan Fayetteville Tucson, Ariz Fayetteville Marion, Ala Springfield, Mo Fayetteville Judsonia	

## MEDICAL COLLEGE.

## SESSION 1891-92.

## FIRST COURSE STUDENTS, 78.

NAME.	PRECEPTOR.	STATE.
Abington, William H	Dr. W. S. Pickett	Arkansas
Atkins, Charles A	Medical Department, A. I. U	Arkansas
Barnes, Robert W	Dr. W. T. Brown	Arkansas
Bailey, Walter E	Dr. W. T. Bailey	Arkansas
Baker, James Edwin	Dr. W. P. Baker	Arkansas
Bates, George	Medical Department, A. I. U	Arkansas
Bates, James M	Medical Department, A. I. U.	Arkansas
Beakley, Napoleon Bonaparte, Jr	Dr. L. P. Gibson	Arkansas
Blakeley, John Pinkney	Dr. S. W. Taylor	Arkansas
Biakeley, Thomas B	Medical Department, A. I. U.,	Arkansas
Bearden, Thomas M		Arkansas
Bond, Thomas J		I. Territory
Cantrell, Basil Smith	Dr. John W. Patton	Arkansas
Chastain, Joseph S	Dr. J. B. Chastain	Arkansas
Clark, William Isaac Anderson	Dr. A. E. Moore	Arkansas
Collins, Fred A	Dr. John W. Blow	Arkansas
Combs, John Breckinridge	Medical Department, A. I. U	Arkansas
Cowan, James M	Dr. McPhearson	Arkansas
Davenport, Robert G		Texas
Davis, Alexander Brocknell		Arkansas
Elliott, George Thomas	Drs. H. Ball & E J. McKinney.	Texas
Lyans, Walter C	Drs N. A. Hitta J. W. Waren	Arkansas
Eubanks, Felix Grunday	Medical Department, A. I. U.	I. Territory
Golding, Charles C	Dr. J. M. Van Zandt	Arkansas
Garner, Thomas Jessen, Jr	Dr. Thomas J. Garner, Sr	I. Territory
Griffen, Beaushine J	Dr. A. K. Iliggs.	Arkansas
Hale William	Medical Department, A. I. U Medical Department, A. I. U	Texas Arkansas
Harrod, George		Arkansas
Harris, Larkin L		Arkansas
Hassell, John William	Medical Department, A. I. U.	Arkansas
Hathaway, Alfred H	Dr. M. M. Nichols	Arkansas
Herring, Robert G	Dr. E. M. Stephens	Arkansas
Hinche, George W	Dr. I. Newton	Arkansas
Hughes, Joseph F	Medical Department, A. I. U	Arkansas
Johnson, Nathaniel J	Dr. T. J. Daniel	Arkansas
Jones, Christopher C	Medical Department, A. I. U	Arkansas
Jones, Wiley A	Dr. E. B. Jones	Arkansas
Lane, Edward Chapman	Medical Department, A. I. U	Arkansas
Leigh, Andrew F	Medical Department, A. I. U.,	Arkansas
Linzy, James R	Dr. S. C. Burgess	Arkansas
Love, Jerome D	Medical Department, A. I. U	Arkansas
Lusby, Robert H	Dr. D. A. Gray	Tennessee
McGahey Johnson C	Dr. G. H. Fromnholz	Washington
McMahon, James Wiley	Dr. G. C. T. Chamness	Arkansas
Martindale, George Hicks	Medical Deparsment, A. I. U	Arkansas
Mashburn, Thomas Warren	Dr. J. G. Morden	Arkansas
Mayfield, Alva B	Dr. J. D. Mayneld	Arkansas
Mizell, Henry A	Dr. T. E. Murrell	Tennessee
Moreland, Little B	Dr. John H. Driver	Arkansas

Baker, Robert Lee	Dr. J. H. Lindsey	Missouri
Bennett, Burrell L	Dr. A. W. Wilder	Arkansas
Cleckler, William H	Dr. J. A. Ryan	I. Territory
Dickinson, George L	Dr. A. H. Wilson	Arkansas
		Texas
Durham, George W	Dr J. J. Vaughan Medical Department, A. I. U.	
Fisher, Daniel N		Arkansas
Glover, Barnwell B	Dr. W. I. Norcott	Arkansas
Harkey, Reuben M	Dr. W. H. Hill	Arkansas
Herron, Alfred Webb	Medical Department, A. I. U	Arkansas
Holt, Alexander H	Dr. J. F. Rhades	Arkansas
Jackson, James Henry	Dr. G. C. T. Chamness	Arkansas
Jones, William E	Dr. J. B. Wear	Arkansas
Kolb, James Silas	Un. C. P. Clark	Arkansas
Lively, William M	Dr. Frank P. Payne	Arkansas
Mathews, Joseph H	Dr. J. S. Westerfield	Arkansas
Meeks, Edward D	Dr. L.J. Mc Imont	Arkansas
Ogilvie, James W	Dr. John P. Mitchell	Arkansas
Palmer, Luther B	Dr. W. B. Palmer	Arkansas
Puker, Juses	Medical Department, A. I. U	Arkansas
P wel, Mr. ro F	Dr. J. H. C. King	Arkansas
Su chey, Limes D		Arkansas
Thompson, James Isaac	Medical Department, A. I. U	Arkansas
Vaughan, John T	Medical Department, A. I.	Arkansas
Vaughan, Milton	Dr. J. J. McAlmont	Arkansas
Vaughter, Samuel Paul	Dr. J. S. Westerfield	Arkansas
	Medical Department, A. I. U.	Arkansas
		Arkansas
Ward, Stonewall Jackson	Dr. A. W. Wilder	
Waters, George Aaron	Dr. C. E. Frost	Arkansas
Westbrook, Thomas H	Dr. D. N. Fisher	Arkansas
Wycough, William Edgar	Dr. C. E. Cantrell	Arkansas
Nelson, Charles Harmon	Medical Department, A. I. U.	Arkansas
Nelson, William Solon	Medical Department, A. I. U	Arkansas
Oliver, Hardy Preston	Dr. T. E. Ohver	Texas
Paddock, E. Everett	Medical Department, A. I. U.	Arkansas
Page, James A. T	Dr. E. A. Bonneau	Texas
Pleas, Edgar	Medical Department, A. I. U.	Arkansas
. I m s H	Medical Department, A. I. U	Arkansas
Powell, James Percy	Medical Department, A. I. U.	Louisiana
Pullin, James H	Medical Department, A. I. U.	Arkansas
Reves, Marshall O	Medical Department, A. I. U.	Arkansas
Rotert, Florenz	Medical Department, A. I. U.	Arkansas
Roundtree, James Longstreet	Drs. Blythe and Black	Texas
Russell, Robert L	Dr. J. W. S. Leslie	Arkan-as
Simmons, David H	Medical Department, A. I. U	Arkansas
Smith, Robert L	Dr J. II Estes	Arkansas
Stayton, Thomas L	Dr. J. H. Stayton	Arkansas
Stewart, James L	Dr. J. J. Stewart.,	Arkansas
Stover, Arthur Reece	Dr. R. M. Enders	Arkansas
Lay. 1. 1 5 5 H	Medical Department, A. I. U.	Texas
Thomasson, Joseph B	Dr. N. T. Thomasson	Arkansas
Truett, Edward	Medical Department, A. I. U	Arkansas
Wallace, Charles I	Dr. John H. Driver	Arkansas
Wallace, John M	Dr. W. L. Lindsey	Arkansas
Wairen, Gus A	Medical Department, A. I. U.	Arkansas
Williams, Charley B	Dr. S. M. Brown	Arkansas
Wilson, James Jefferson.	Medical Department, A. I. U	Arkansas
Wood, Bynum	Medical Department, A. I. U.	Arkansas
Wend John	Dr. C. B. Stark	Arkansas
The state of the s	Table Carlot Could be a season a season as a	

## THIRD COURSE STUDENTS, 4.

NAME.	PRECEPTOR.	STATE.
Buckner, Thomas J. Campbell, Floyd S Parker, Samuel Patterson, John W., M. D	Medical Department, A. I. U Medical Department, A. I. U Medical Department, A. I. U Practitioner	Texas Arkansas Arkansas Arkansas
GR	ADUATES, 26.	
NAME.	POSTOFFICE.	STATE.
Baker, Robert L. Bennett, Burrell L. Buckner, Thomas J. Campbell, Floyd S. Dickinson, George L. Durham. George W. Fisher, Daniel N. Harkey, Reuben M. Herron, Alfred W. *Iliggs, Archie K. Jackson, James Henry Kolb, James Silas. Lively, William M. Ogilvie, James W. Palmer, Luther B. Parker, Samuel. Powell, Millard F. Thompson, James Isaac. Vaughan, John T. Vaughan, Milton Vaughter, Samuel Paul Walton, James W. Ward, Stonewall Jackson Waters, George Aaron Westbrook, Thomas H. Wycough, William Edgar	Bakersfield, Ozark county Ellsworth, Logan county Bridgeport, Wise county Cascade, Faulkner county Norwoodsville, Sevier county Wolf City, Hunt county Bryant, Saline county Russellville, Pope county Lonoke, Lonoke county Hallsville, Newton county Center Ridge, Conway county Smedley, Johnson county Rose Bud, White county Harmony, Johnson county Cabot, Lonoke county Beeker, Hot Spring county Yellville, Marion county Little Rock, Pulaski county Little Rock, Pulaski county Conway, Faulkner county Traskwood, Saline county Dublin, Logan county Dublin, Logan county Shoppach, Saline county Solado, Independence county	Missouri Arkansas Texas Arkansas

<sup>\*</sup>Passed a successful examination 1891; diploma withheld, he being under age.

## SUMMARY BY CLASSES AT FAYETTEVILLE.

Post Graduates	5
Seniors	12
Juniors	20
Sophomores	33
Freshmen	98
Sub-Freshmen	14
"A's"	78
"B's"	67
Not classified	14
Specials	11
Music	38
Elocution	114
Total	704
Names repeated (Music, 34; Elocution, 114)	48
Total at Fayetteville.	56

## SUMMARY BY COURSES AT FAYETTEVILLE.

	_		
	Males.	Females.	Total.
Doctor of Philosophy	2 80 51 48 38 22 49 2 2 47 8 7	30 39 62 30	5 119 146 48 38 52 49 13 11 67 14 38
Elocution pupils	31	83	114
Total			704
Names repeated (in Music, 34; Elocution, 114)			148
Total at Fayetteville			138
Grand Total			928

## ALUMNI OF THE ARKANSAS INDUSTRIAL UNIVERSITY.

NAME.	Residence When a Student.	Present Residence and Remarks.	
	CLASS OF	1875.	
Botefuhr, Laura D	Fayetteville, Ark	Mrs. G. W. Schulte, Fort Smith, Ark.	
Carson, Ann E	Jonesboro, Ark	Mrs. John Knight, Jonesboro, Ark.	
Carson, Augusta O	Jonesboro, Ark	Mrs. T. W. Cline, Downey, Cal.	
Davis, Lizzie P	Bentonville, Ark	Mrs. R. C. Brown, Florence, Arizona.	
McCart, Eva	Fayetteville, Ark	Mrs. D. M. Main, Cheney, Kansas.	
McKinney, Charles F	Ozark, Ark	Traveling Salesman, Ozark, Ark.	
Moore, Lucy J	Fayetteville, Ark	Mrs. Ross, Cincinnati, Ark.	
Putnam, Anna, A. M	Fayetteville, Ark	Teacher in Public School, Fayetteville, Ark.	
	CLASS OF	1876.	
Barnett, Nettie, B. L	Fayetteville, Ark	Mrs. C. Boles, Fayetteville, Ark.	
Gorton, Belle L., A. B	Aurora, Ill	Author, Chicago, Ill.	
Gregg, Alfred W., A. B	Fayetteville, Ark	Deceased.	
Harris, Agnes, A. B	Fayetteville, Ark	Mrs. Johnson, Kansas City, Mo.	
Harris, Sara E., A B	Fayetteville, Ark	Professor in A. I. U. for several years-Mrs. S. H. Conrad, Oceo'a, Mo.	
Johnson, Albert P., A. B.	Wesley, Ark	Lawyer, Winfield, Kansas.	
Neal, W. H., B. L	Van Buren, Ark	Lawyer, Van Buren, Ark.	
Taylor, E. L., B. L	Fayetteville, Ark	Farmer, Bentonville, Ark.	
Waggener, W. J., A. M	Farmington, Ark	Professor of Natural Philosophy, University of Colorado, Boulder, Col.	

Residence When a Student.	Present Residence and Remarks.		
CLASS OF	1877.		
Fayetteville, Ark			
Bloomer, Ark	Deceased.		
Mount Holly, Ark	Physician, Mount Holly, Ark.		
Fayetteville, Ark	Fayetteville, Ark.		
Fayetteville, Ark	Teacher in A. I. U., Fayetteville, Ark.		
Fort Smith, Ark	Lawyer, Fort Smith, Ark.		
Bentonville, Ark	Deceased.		
Fayetteville, Ark	Teacher in A. I U., Fayetteville, Ark.		
Fayetteville, Ark	Lawyer, Fayetteville, Ark.		
Fayetteville, Ark	Teacher, Fayetteville, Ark.		
CLASS OF	1878.		
Fayetteville, Ark	Mrs. H. M. Hudgius, Hot Springs, Ark.		
Fayetteville, Ark	Physician, Fayetteville, Ark.		
Charleston, Ark	Lawyer, Charleston, Ark.		
Fayetteville, Ark	Deceased.		
Fayetteville, Ark	Superintendent Public Schools, Houston, Texas.		
	CLASS OF  Fayetteville, Ark		

NAME.	Residence When a Student.	a Student. Present Residence and Remarks.		
	CLASS OF	1879.		
Butler, H. M., A. B	Varner Station, Ark	Teacher, Waco, Texas.		
Floyd, J. C., A. B	Bentonville, Ark	District Prosecuting Attorney, Yellville, Ark.		
Harrod, J. H., A. B	Lonoke, Ark	Lawyer, Little Rock, Ark.		
farrs, S. E., A. B	Viney Grove, Ark	Editor Democrat, Fayetteville, Ark.		
Isrshall, J. C., A. M	Avoca, Ark	Lawyer, Little Rock, Ark.		
atton, L. Alice, A. M	Viney Grove, Ark	Teacher, Prairie Grove, Ark.		
eague, C V., A B	Toledo, Ark	County Judge, Hot Springs, Ark.		
Vood, C. D., A. B	Hamburg, Ark	Judge Circuit Court, Monticello, Ark.		
	CLASS OF	1880.		
roke, G. W., A. M	Bentonville, Ark	Adjunct Professor of Mathematics in Arkansas Industrial University		
ohnson, T. M., B. L. L	Wesley, Ark			
ing, Artelle Alice, B. L. L.	Fort Smith, Ark	Mrs. J. C. Belt, Brooken, I. T.		
itchens, T. B., A. M	Jonesboro, Ark	County and Circuit Clerk, Paragould, Ark.		
angford, W. H., A. B	El Dorado, Ark	Merchant, Pine Bluff, Ark		
atton, Mattie J., B. L. L	Viney Grove, Ark	Teacher, Viney Grove, Ark.		
oss, T. C., A. B	Fort Smith, Ark Lawyer, Fort Worth, Texas.			
ussell, Lawrence, A. B	Russellville, Ark Lawyer, Russellville, Ark., Representative.			
illman, J. N., B L L	Fayetteville, Ark	District Prosecuting Attorney, Fayetteville, Ark.		
liliams, Naomi J., A. M	Fayetteville, Ark	Teacher in Arkansas Industrial University, Fayetteville, Ark.		

NAME	Residence Wh'n a Student	Present Residence and Remarks.	
	CLASS OF	1881.	
Carnall, Ella, A. M	Fort Smith, Ark	Adjunct Professor of English and Modern Languages in A. I. U.	
Ellis, F. W , A B		United States Signal Service, Galveston, Tex.	
Moore, J. 1., A. B		Lawyer, City Judge, Helena, Ark.	
Reed, Lina, A. B		Favetteville.	
Reiff, O. S., A. B		Lawyer, Little Rock, Ark.	
Watson, J. J., A. B	,	Teacher in Australia.	
	CLASS OF	1882.	
Booth, W. P., A. B	Batesville, Ark	Farmer, Reyno, Ark.	
Brown, W. D., A. B	Newtonia, Mo	Physician, Newtonia, Mo.	
Carrigan, A. H., A. B.	Washington, Ark	Lawyer, Wichita Falls, Tex.	
Chausler, C. K., A B	Washburne, Mo	Lawyer, Grant's Pass, Ore.	
Cherry, W. R., A. B	Patterson's Bluff, Ark	Cashier of Bank, Paris, Ark.	
Gregg, L. W., A. B	Fayetteville, Ark	Lawyer, Fayetteville, Ark.	
Hon, Daniel, A. B	Waldron, Ark	Lawyer, Waldron, Ark.	
Jones, Gustave, B. L. L	Jacksonport, Ark	Lawyer, Newport, Ark.	
Lanier, J. A. M., A. B.,	Mountain Home, Ark	Principal Mountain Home Academy, Mountain Home, Ark.	
McDonough, J. B., A. B	Bloomer, Ark	Prosecuting Attorney Twelfth Circuit, Fort Smith, Ark.	
McFarlane, W. R., A. B	Enterprise, Ark	Lawyer, Greenwood, Ark.	
Oats, T. F., A. B	Russellville, Ark	Physician, Mexia, Tex.	
Pickel, J. W., A. B	Mulberry, Ark	Physician for Crystal Plate Glass Co., Crystal City, Mo.	
Rogers, P. A., A. B	Rocky Mount, La		
Shell, G. C., B. L. L	Augusta, Ark	Lawyer, Lake Village, Ark.	

NAME	Residence When a Student.	Present Residence and Remarks	
	CLASS OF	1883.	
Bates, C. O., A. B	Cincinnati, Ark	Professor, Coe College, Cedar Rapids, Iowa	
Cravens, Jessie, B. L. L	Fayetteville, Ark	Teacher in A. I. U., Fayetteville, Ark.	
England, W. W., A. B	Evansville, Ark	U. S. Coast Survey.	
Greaves, C. D., A. B.	Hot Springs, Ark	Lawyer, Hot Springs, Ark.	
Mayes, J F, A B	Fayetteville, Ark	Lumber Dealer, Fayetteville, Ark.	
Stroup, Henry, A. B	Webb City, Ark	Editor, Roseville, Ark.	
Taliaferro, Lou, B. E. L	Rentonville, Ark	Stenographer, Chicago, Ill.	
	CLASS OF	1884.	
Anderson, L. S., B. L. L	Herndon, Ark	Clerk in Land Office, Washington, D. C.	
Duncan, W. H., B. L. L	Conway, Ark	Lawyer, Conway, Ark.	
Edmiston, W. L., B. L. L	Springfield, Mo	Principal of Public School, Van Buren, Ark.	
Gates, D, A, A B	Fillar Station, Ark	County and Probate Judge of Desha County, Arlansas City, Ark.	
Goodwin, W. P., B. L. L	El Dorado, Ark	Editor, El Dorado, Ark.	
Hillis, E. W., B. L. L.	Jonesboro, Ark	Lawyer, Jonesboro, Ark.	
Hudson, J. H., B. L. L	Dardanelle, Ark	l'eacher and Farmer, Dardanelle, Ark.	
Lake, Ella, B. L. L	Viney Grove, Ark Teacher of Music, Tahlequah, Indian Territory.		
Reed, G. W. M., Jr., B. L. L	Fayetteville, Ark	Lawyer, Los Angeles, Cal.	
Taff, J. L , A. B	Waldron, Ark	Principal Public School, Austin, Texas.	

NAME.	Residence When a Student.	Present Residence and Remarks.		
	CLASS OF	1885.		
Hart, J. C., A. B	Dardanelle, Ark	Lawyer, Dardanelle, Ark.		
Howell, J. W., B. L. L	Clarksville, Ark	Cotton Buyer, Clarksville, Ark.		
Kinsworthy, E B, B L L	Black Colony, Ark	Lawyer, Arkadelphia, Ark.		
Notrebe, E. P	Sarassa, Ark	Physician, Booneville, Miss.		
Woodall, W. H., A. B	El Paso, Ark	President Female College, Lake City, Fla		
Woolverton, C. D., B. L. L	Center Ridge, Ark	Principal Public School, Sheridan, Ark		
	CLASS OF	1886.		
Bates, J. H., A. B	Cincinnati, Ark	Lawyer, Corsicana, Tex.		
Leverett, Mary, A. B	Fayetteville, Ark	Mrs. J. A. Taff, Austin, Tex.		
Middleton, Mai, A. B	Fayetteville, Ark	Mrs. Robert Chasteen, Fort Smith, Ark		
Mulhoiland, Sara, A. B	Fayetteville, Ark	Mrs. J. F. Mayes, Fayetteville, Ark		
Tillar, B. J., A. B	Tillar Station, Ark	Lawyer, Little Rock, Ark.		

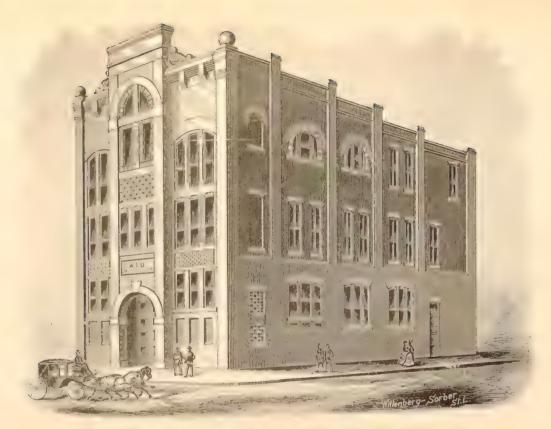
NAME.	Residence When a Student.	Present Residence and Remarks.	
	CLASS OF	1888.	
Bowles, Preston, C, E	Hancock, Md	W. Va. Central, Elkins, W. Va.	
Crozier, William N., A. B	Fayetteville Ark	Missionary to China.	
Danaher, Mike, A. B	Little Rock, Ark	Law Student, Little Rock, Ark.	
Dickson, W. E., A. B	Magnolia, Ark	Teacher, Waldo, Ark.	
Drake, N. F., C. E	Cincinnati, Ark	Assistant State Geologist, Geological Survey, Austin, Tex.	
Flynn, W. M	Fayetteville, Ark	Teacher, Oxford Bend, Ark.	
Hobbs, John H., A. B	Bentonville, Ark	Lawyer, San Antonio, Tex.	
Pace, Ida, A. B	Harrison, Ark	Teacher, Ark. Ind. University.	
Polson, Alice, B. S	Fayetteville, Ark	South West City, Mo.	
Powell, W. W, A B	Meibourne, Ark	Lawyer, Greenwood, Ark.	
schoff, George C , C E	Annapolis, Md	Adjunct Professor in A. I. U. Fayetteville, Ark.	
Freadwell, Lee, C. E	Toledo, Ark	Assistant Engineer, J. A. C. Waddell, Kansas City, Mo	
Warren, George A , B. L a	Hazel Grove, Ark	Superintendent Public Schools, Fordyce, Ark.	
	CLASS OF	1889.	
Aiken, Don C. B., C. E	Fayetteville, Ark	Engineering Department, Johnson Co., Johnstown, Pa.	
Fishback, L. F., B. S	Fort Smith, Ark	Law Student, Austin.	
Harrison, Grace, B.S	Washington, D. C	Fort Smith Ark,	
McNeeley, John C., C. E		Planter, Rackensack, Ark.	
Obenshain, Ora, B. S	Eureka Springs, Ark	Teacher in Public Schools, Eureka Springs, Ark.	
Slagte, Ida, A. B		Mrs. Gilbreath, Hico, Ark,	
Taff, Mary, A. B		Teacher in Institute for the Blind, Austin, Tex.	
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NAME.	Residence When a Student.	Present Rostdence.		
	CLASS OF	1890.		
Taff, Albert G., B. C. E	Fayetteville, Ark	Deceased, 1890.		
Humphrey, Gustavus A., A.B	Fort Smith, Ark	Medical Student, Fort Smith, Ark,		
Gannaway, John R., A. B	Warren, Ark	Warren, Ark.		
Harvey, F. L., Ph. D	Orono, Me	Orono, Me., Professor in Maine Agricultural College.		
Hervey, W. Rhodes, B. S	Santa Anna, Cal	Law Student, Ann Arbor, Mich.		
Morrow, Mattie M., B. S	Fayetteville, Ark	Teacher in Public School, Fayetteville, Ark.		
Wheeler, John N., A. B	Wahren, Ark	Merchant, Warren, Ark.		
	CLASS OF	1891.		
Drake, C. H., C. E	Cincinnati, Ark	Geological Survey, Texas.		
Horton, S. A., B. A	Fairview, Ark	Law Student, Fairview, Ark.		
Martin, Mack, M. E	Hackett City, Ark	Instructor in Machine Shop, A. I. U.		
Newman, A. J., B. A.	Lonoke, Ark Feacher, Texas.			
Patton, C. C., B. A	Fayetteville, Ark	Law Student, Ann Arbor, Mich.		
Shreve, A. W., C. E	Farmington, Ark	Farmington, Ark.		
Shreve, H. B., C. E	Farmington, Ark	With Johnson Co., Johnstown, Pa.		
Skelton, G. V., C. E	Fayetteville, Ark	Professor of Civil Engineering, Coe College, Cedar Rapids, Iowa.		

#### SCHEDULE OF COLLEGIATE RECITATIONS.

FIRST PERIOD.	SECOND PERIOD.	THIRD PERIOD.	FOURTH PERIOD.	FIFTH PERIOD.	SIXTH PERIOD.
1.	I.	I.	1.	I.	I.
German, M., W., Th., F German, Si, Re., T	English Philology, Th	German, St. Re., Th. Metalhirgy, T	Amer. Hist., W., F Greek, M., W., Tb., F Stratigraphy Paleonto ogy or Petrography	Botanical Labora Chemical Labora Geological Labora Zoological Labo	atory, T., Th. nory, M., T., Th., F.
II.	II.	II	11.	п.	11.
Latin, M., W., Th., F Hist. Eng. Lit., T An. Chem., <sup>1</sup> M.——F. Zoology, T., Th Horticulture, M., W., F Hist. Geology <sup>2</sup> , M. W. F.	Greek, M., T., Th., F	Or. Chemistry, M., W., F. Botany, M., W., F. English, M., W., F. Polit. Econ, T., Th	F. Entomology, M., W., F Mathematics 18, M., W., F  Botanical Laboratory, T., Th. Chemical Laboratory, T.— F. Geological Laboratory, M., W. Zoological Laboratory, M. W. Drawing and Engineering Laboratory.		
Ш.	III.	111.	III 14.	III.	111.
Mathematics 8, M,—F V t Anat. 4, M.—F French St. Re, M Spanish Si. Re., F	Heat and Light 7, T., Th. Horticult. 3, M., T., W., F.	Botany 10, f., Th Chemistry 11, M., W., F., Des. Geom. f. French, M., 1., Th., F. French Si. Re, W. Greek, M., T., 1h., F Sch. Manag. 12, M., W., F.	Gen Geológy, T., W. F Spanish Si Re., M Stock Breeding, M., W., F	Botanical Laborator	ry and Field Work, M., S., W.
IV.	IV.	IV.	IV.	IV.	IV.
Latin, M., T., W., F Pedagogy, Th Zoology, 5 T., Th Shop or Farm, M.—F		Mathematics, M.—F Erglish, M., W., F.(?)	Const. Hist., M French, T., W., Th., F Greek, T., W., Th., F Mach. Shop Pr., M. Physics, T., W., Th., F Spanish, T., W., Th., F		atory, W., F.

Note.—The Schedule for the Sensor and Junior Engineering Students will be published at the beginning of each term. Second and Third Terms—1 and 2 Mineralogy, M.—F.; 2 Paleontology. 3 School Manag., Hist, of Ed., and School Law. 4 Vet. Science and Agr. 5 Anatomy; Bacteriology. 6 Third Term, Emeryalogy also 7 third Ferm. Alin, and Fop of Surveying Darry Husbanarry 9 Third Term, Highways 10 At First Period for Third Term. 11 Third Ferm. M.—F. 14 One Term ody 1 Introl Ferm. Second and Third Term, Chem Philosophy



MEDICAL DEPARTMENT ARKANSAS INDUSTRIAL UNIVERSITY, LITTLE ROCK, ARK.

#### THE FOURTEENTH

## ANNUAL ANNOUNCEMENT

OF THE

# MEDICAL DEPARTMENT,

SESSION OF 1892-93.

# PRELIMINARY FALL COURSE,

SESSION OF 1892, LITTLE ROCK, ARK.

#### PROFESSORS:

EDWIN BENTLEY, M. D., Surgical Pathology.

L. P. GIBSON, M. D., Minor Surgery and Bandaging.

E. R. DIBRELL, M. D., Physical Diagnosis.

S. H. KEMPNER, M. D., Urinary Analysis, Microscopy and Bacteriology.

WILLIAM L. WORCESTER, M. D., Insanity.

NOTE. - The names of the entire Medical Faculty are given on page 12.

THE REGULAR WINTER COURSE of lectures will begin on Wednesday, November 2, 1892, and continue twenty-four weeks, or until April 19, 1893.

Lectures will be delivered daily during the six days of each week.

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The matriculation book will be opened from and after September 1st to students desiring to matriculate early and secure choice of seats.

THE PRELIMINARY FALL COURSE, which is given gratis to all the students, will begin on Monday, October 3, 1892, and continue to Wednesday, November 2, 1892, when the regular winter session opens.

In making this annual announcement the Faculty feel great satisfaction in referring to the continued success and prosperity of the Medical Department. The last session shows the largest class of matriculates that has ever been recorded in the history of this Department. The annual increase of patronage, the very cordial indorsement of the Arkansas State Medical Society at its last meeting, and the generous manifest influence of the medical profession throughout the State, is reciprocally appreciated and accepted by the Faculty, as an encouragement to them to continue the arduous labors they have so long and so zealously maintained.

#### AMERICAN MEDICAL COLLEGE ASSOCIATION.

In our announcement for 1891 we gave notice that:

After July 1, 1892, all students who shall not have taken a full course of lectures prior to that date, will be required to attend three courses of lectures, of six months each, in three separate years, as a prerequisite to graduation.

The Faculty design to keep pace with the progress of higher medical education, and make a diploma from the Medical Department as honorable and valuable to her alumni, compatible with their environments, as any other medical college.

THE REGULAR THREE TERM COURSE has been graded as follows:

First Term will include Anatomy, Physiology, Pathology, Chemistry, Materia Medica and Therapeutics, Microscopy, Hygiene and Public Health, Dissections and attendance upon the Clinics.

Second Term: Anatomy, Physiology, Pathology, Materia Medica and Therapeutics, Practice of Medicine, Surgery,

Midwifery, Diseases of Women and Children, Ophthalmology, and Otology, Medical Chemistry, Toxicology, Medical Jurisprudence and attendance upon the Clinics and Hospital.

Third Term: Practice of Medicine, Surgery, Midwifery, Diseases of Women and Children, Laryngology and Rhinology, Diseases of the Nervous System, Medical Chemistry, Toxicology, Microscopy, Hygiene and Public Health, Medical Jurisprudence, Dissections and attendauce on the Clinics and Hospital.

#### LOCATION.

The City of Little Rock, geographically and for convenience, is very happily situated, being central in the State and a goodly distance from any other large city. Its only rivals are St. Louis on the north, Memphis on the east and Galveston on the south.

It has a population of 40,000 people and upward, and has always been classed as one of the healthiest, if not the healthiest city west of the Mississippi River. Few cities can boast of better public schools, colleges and universities, than Little Rock. All the eleemosynary institutions of the State are located here. These are the Blind, Deaf-Mute and the Insane Asylums.

#### COLLEGE BUILDING.

The new structure is a very fine, imposing edifice, three stories in height, constructed of brick, and admirably arranged for the convenience of both students and instructors.

It has a large lecture hall, fine amphitheater with chairs, a library, a reading room, a museum, several private and elegant dissecting rooms, all well lighted and ventilated. In fact, it is designed to be a modern and model medical college building. It is situated on Second and Sherman streets.

#### HOSPITALS.

The Little Rock Infirmary, a new institution designed solely for the treatment of acute diseases, has a capacity of fifty beds. This hospital, splendidly equipped and furnished with modern conveniences and improvements, is in the very best sanitary condition, and under the supervision and management of trained nurses—Sisters of Charity.

The Pulaski County Hospital has just been erected at a cost of some \$30,000. It is a handsome brick structure, well arranged, complete in all its equipments, and has a capacity of two hundred beds.

It is under the general direction of the Judge of Pulaski County, and is also benevolent in character. In this institution the chronic diseases and injuries of long standing will generally predominate.

Accidents from railways, marine patients, and the sick and injured from the city, county and State, find in these hospitals shelter, food, raiment and that Christian attention so cheering and comforting in sickness and distress.

Their inmates embrace all classes and conditions of unfortunates—white, colored, male, female, adults and children—and with them are found almost every character and form of disease, except contagious affections, which are otherwise provided for.

#### THE ISAAC FOLSOM CLINIC.

This Clinic is thus designated in honor of the personal life, friendship and interest this honorable physician and philanthropist has entertained for the Medical Department, from its incipiency to the present date of its history. Last year he legally executed an instrument of writing endowing this Clinic with twenty thousand dollars, thus perpetuating the *Isaac Folsom Clinic* as an integral part of this department.

#### METHODS OF TEACHING.

Instructions in this department will be given by didactic and clinical lectures, practical work in the dissecting room, chemical and physiological laboratories, and by daily quizzes upon the subject of preceding lectures.

When the subject will admit of it, each branch will be so illustrated by means of diagrams, charts, models and instruments, as to address the understanding of the student through the medium of sight as well as hearing.

#### THE EXPENSES OF LIVING, ETC.

The expenses of living in the City of Little Rock will, of course, vary according to the views and habits of students. Good board, at the present time, including lodging, fuel and lights, may be had, at a convenient distance from the College, at from \$4 to \$6 per week, and from \$13 to \$18 per month.

A list of parties desiring to board medical students will be found at the College building. Persons desiring further information are requested to address the Secretary of the Faculty.

#### TERMS OF ADMISSION.

Applicants must be 18 years of age and present a creditable certificate of good moral character; a diploma of graduation from a good literary and scientific college or high school; a first-class grade teacher's certificate; or, lacking this, pass a thorough examination in the branches of a good English education, including mathematics, Englsh composition and elementary physics or natural philosophy.

In conformity with Article III, American Medical College Association.

#### TERMS.

The fee for a full course of lectures will be: Professors' tickets, \$50; matriculation ticket (paid but once), \$5; Demonstrator's ticket for each course, \$5; Hospital ticket, each course, \$3; graduation fee, \$25.

No variation is made, under any circumstances, from the established fees of the College, they having been placed originally at the very lowest established figure commensurate with the interests of both student and College.

In the thirteen terms of the Medical Department, Arkansas Industrial University, there have been 738 matriculates and 172 graduates.

For more specific information and catalogue apply to

R. G. JENNINGS, M. D.,

Secretary of Faculty,

Little Rock, Ark.

# THE BRANCH NORMAL COLLEGE.

#### GENERAL STATEMENT.

The Branch Normal College is a department of the Arkansas Industrial University, established pursuant to an act of the General Assembly of the State of Arkansas, approved April 25, 1873, and has been in operation since September 27, 1875. Its primary object is the training of teachers for efficient service in the colored public schools of the State—the law referred to having been enacted with special reference to the "convenience of the poorer classes." For the purpose of carrying out the intent of the law, by enabling those who wish to avail themselves of its advantages, there is no charge for tuition for appointees; the only requirements for admission being suitable age and qualification, and appointment from one of the County Judges, and the payment of the entrance fee of \$5.

#### LOCATION, ETC.

The school property consists of a beautiful tract of twenty acres of ground, in the suburbs of Pine Bluff, Jefferson County, Arkansas, and a few rods from the junction of the Little Rock, Mississippi River & Texas and "Paramore" Railroads. The school building, completed in 1881, and occupied January 30, 1882, is one of the handsomest educational edifices in the State, as well as one of the best, being warm and comfortable, well lighted and ventilated. It contains one large assembly room, four recitation rooms, and cloak rooms for males and females. The building is of brick, with slate roof and trimmings of Alabama granite, and cost, with improvements and furniture, \$12,000. The furniture and other equipments are of the best modern style.

The Dormitory, a handsome brick building of seventeen rooms, and the Mechanical Department building, are upon the same grounds.

The Normal course of study is intended to be a full equiva-

lent to a regular college course up to and including the Sophomore year; the only difference being the substitution of Pedagogy for Greek and the higher mathematical branches. The college course adds to this the usual studies of the last two years. Nine classes have graduated from the Institution, and the members are now occupying prominent positions in life. The number of students for the year 1891-2 was 234.

#### THE LIBRARY.

The Library consists of over 2000 volumes, embracing many valuable reference books, such as Appleton's Cyclopædia, Lippincott's Gazetteer, etc. It also has acquired by purchase during the last year a fine collection of the works of standard authors, Shakespeare, Milton, Irving, Cooper, Dickens, Longfellow, Carlye, Tennyson. The library of the Principal, embracing many valuable text and reference books, including the Enclopædia Britannica, is also accessible to students. A small collection of minerals, each of which is a typical specimen, and none of which are duplicates, has been procured. During the past year a valuable supply of apparatus has been added to the educational resources of the institution, consisting of an air-pump, electrical machine, standard barometer, batteries, French microscope, spectroscope, sets of weights and measures, common and metric, etc. The outfit of the Mechanical Department is not surpassed, if equalled, by any in the State.

The Reading Room has been fitted up in elegant style and supplied with quite a number of valuable newspapers and periodical, many of which were furnished by their publishers. Among those on file were the Freeman, Indianapolis; Western Appeal, Minneapolis; Gazette, Huntsville; The Gazette, Little Rock; Globe-Democrat and Republic, St. Louis; The Tyler, Detroit, Mich.; Popular Educator, Boston; Lippincott's Educational Quarterly; American Student, New York; Board of Education, Chicago; School Journal, New York; Weekly Echo, Pine Bluff; National Baptist, Philadelphia; Southern Review, Helena; American Machinist, Scientific American, Forum, Farm, Florist, Nation, publications of American Statistical As-

ociation, scientific publications of the State of Arkansas and of the United States, etc.

#### FEMALE DORMITORY AND BOARDING HOUSE.

The Dormitory for female students is under the supervision of the Principal and his wife. It is a handsome brick structure for the accommodation of thirty or forty students. Board bills are payable monthly in advance, and no deduction is made for loss of time less than one week. Girls staying in the Dormitory are required to keep their own rooms and the halls clean, and to assist in turn, in the dining room and kitchen. They are expected to furnish their own bed linen, and are held responsible for all damage to furniture in their rooms. They are not to visit each others' rooms, except by invitation from the occupants, and two are expected to occupy one room. They are not allowed to change rooms, except by permission, nor to visit in town otherwise. The charge for board, fuel and light thus far has been \$8 per month in advance, and, if possible, that price will be continued.

#### THE MECHANICAL DEPARTMENT.

The operations of this department were begun the present year, under the superintendence of Prof. C. V. Kerr, Superintendent of Mechanic Arts, assisted by Prof. W. S. Harris, a graduate of Miller Manual Labor School of Virginia. The equipment is as follows:

Buildings.—The shop building was completed in February, 1892. It is of brick, and covers a plot of ground 70x70, comprising a wood-shop 35x25, a foundry 25x25, a blacksmith shop 25x25, and a machine shop 35x25. A boiler room 20x25, and a court 35x20 occupies the remaining space.

Wood Shop.—The equipment already secured includes twelve benches with complete sets of carpenters' tools, a double-circular sawing machine, a scroll saw, a buzz planer and six wood turning lathes.

Foundry.—A Collian cupola capable of melting 1½ tons of iron per hour is in position, and the remainder of the outfit

will be added shortly. It will include ladles, moulders' tools, flasks, core oven and rumble, etc.

Forge Shop.—Twelve Buffalo forges are in position, the blast being supplied by a blower, and the smoke drawn off by a large exhaust fan. Besides the usual outfits of anvils, hammers, tongs, etc., there is a Buffalo punch shear and bar cutter capable of cutting off I-inch bar iron ½x3-inch strap iron, or of punching a \(\frac{3}{8}\)-inch hole in \(\frac{3}{8}\)-inch iron.

Machine Shop.—Among the tools already ordered and partly in place, are a 15-inch crank shaper, 24x24x6 feet planer, 20-inch drill press, 15-inchx5 feet turret lathe, 18x6 inch engine lathe, 14-inch by 6 feet engine lathe, 12-inchx5 feet hand lathe, universal milling machine, cutter and reamer grinder, twist drill grinder, power grindstone, etc.

Heating and Power Plant.—Two vertical engines of 12-horse power each are in position, also two 30-horse tubular boilers. The piping for feed water is so arranged that the water passes from either pump or injector through a feed water heater to the boilers; and the exhaust piping is so arranged that the exhaust steam from the engines can be used either to heat the feed water or to heat the shops.

Water Supply.—In the court of the shop building a 4-inch Cook tubular well has been put down, which will furnish 1000 gallons of water per hour. A Cook pump delivers the water to a tank 30 feet above ground, holding 8000 gallons.

Sanitary Provisions.—The shops are thoroughly well lighted, ventilated, heated and drained. Sewer connection is made to all buildings, and the abundant water supply is used to insure cleanliness in wash room and water closets.

The courses in the department are as follows, viz.:

- (a.) A course in general shop work extending over three years, followed by a fourth year's work in one of the shops selected by the student. The design is to enable a young man to choose his trade intelligently and to acquire a sound basis for it.
- (b.) A three years' course in general shop work followed by a fourth year's work in the management of boilers, engines and

heating systems. This course is intended to train young men for the practical work of firemen and engineers.

(c.) A course in general shop work extending over three years, together with class-room work in the theory and practice of teaching, followed by a fourth year's work in handling classes in the shops and in laying out series of practical exercises.

For fuller information respecting this and other departments reference is made to the catalogue of the Branch Normal College.

#### GENERAL EXERCISES.

In addition to the regular class exercises laid down in the curriculum of study, there are regular lessons in vocal music, which are open to all the students. The general exercises also include a review of the Sabbath-school lesson, review of the events of the week, calisthenics, music and drawing. Music upon instruments, the organ, piano, flute, guitar, etc., are extra, but very reasonable in price. There are two Literary Societies, the Junior and Senior, which hold weekly meetings and afford excellent opportunities for practice in oratory, debate and composition. It is required that every student shall become a member and attend the meetings of one of the societies.

The length of the vacation allows the advanced students an opportunity to engage in teaching, and a large proportion of their number have done so during the last five years. In nearly all cases they have given good satisfaction and conduct their schools with a fair degree of success. The Normal students have also assisted in the work of the institution itself as a part of their training.

As a part of their training, the advanced students of the institution assist in the work of teaching.

It will be a great advantage to the institution if the various County Judges will take a special interest in seeing that their counties are represented. The proper blanks for making appointments will be furnished, together with all necessary information, on application to the Principal,

J. C. CORBIN, A. M., Pine Bluff, Ark.

